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Finanční analýza společnosti HUAWEI

Financial Analysis of HUAWEI Company

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## Bachelor Thesis Assignment

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1. Introduction
2. Methodology of financial statement analysis
3. Description of HUAWEI company
4. Financial analysis of HUAWEI company
5. Conclusion

Bibliography  
List of Abbreviations  
Declaration of Utilization of Results from the Bachelor Thesis  
List of Annexes  
Annexes

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### **The declaration**

“Herewith I declare that I elaborated the entire thesis, including all annexes, independently.”

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# 1. INTRODUCTION

This bachelor thesis is about company's financial analysis of HUAWEI. It is a classical high-technology and a represent of innovation companies in China, which HUAWEI is the second largest telecommunications provider and a leading provider of global information and communication solutions.

The goal the bachelor thesis is the financial analysis of HUAWEI by applying selected methods to assess the past and current financial situation, based on the historical data of 2007-2011 from company's annual reports.

This bachelor thesis includes 3 main parts:

The first part is statement of financial analysis methodology. This part is a description of the methodology of financial analysis and it shows the definition of financial analysis, the goal of financial analysis, the sources of data and the methods of common-size analysis and financial ratios analysis.

The second part is focused on financial situation of HUAWEI. This part introduces the general situation of HUAWEI and it shows a part of production and service, a part of research, development and innovation, a part of development history and a part of enterprise culture.

The third part includes financial analysis of HUAWEI. This part analyzes HUAWEI's financial data by the common-size analysis, financial ratios analysis, pyramidal decompositions and influence quantification.

Finally, chapter 5 summarizes the results of the financial analysis

## **2. METHODOLOGY OF FINANCIAL STATEMENT ANALYSIS**

This part is statement of financial analysis methodology. It is a discussion about the methodology of financial analysis, and it will show the definition of financial analysis, the goal of financial analysis, sources of data liked Balance Sheet, Income Statement and Statement of cash flow and the methods that include common-size analysis, financial ratio analysis, pyramidal decompositions and influence quantification. By the discussion of this part, we can know what is financial analysis and how to analyzing these data.

The types of financial analysis results evaluation are 4 varieties:

- Result evolution over the time (here choose for analysis).
- Results comparison with competition or industry statistics.
- Comparison of true results with the plan.
- Comparison with recommended values (rating agencies etc).

### **2.1 Definition of Financial Analysis**

#### **2.1.1 What is financial analysis?**

Financial analysis (also referred to as financial statement analysis or accounting analysis or Analysis of finance) refers to an assessment of the viability, stability and profitability of a business, sub-business or project.

It is performed by professionals who prepare reports using ratios that make use of information taken from financial statements and other reports. These reports are usually presented to top management as one of their bases in making business decisions.



- Continue or discontinue its main operation or part of its business;
- Make or purchase certain materials in the manufacture of its product;
- Acquire or rent/lease certain machineries and equipment in the production of its goods;
- Issue stocks or negotiate for a bank loan to increase its working capital;
- Make decisions regarding investing or lending capital;
- Other decisions that allow management to make an informed selection on various alternatives in the conduct of its business.

Financial analysis is based on accounting data and other related information and statements, and adopt a series of specialized techniques and methods of analysis, to the enterprise and other economic organizations in the past and present relevant financing activities, investment activities, business activities, distribution activities the profitability, operating capacity, solvency and growth capacity situation analysis and evaluation of the economic management activities. It is for investors, creditors, operators and other concerned about enterprise organization or individual to understand the past, evaluation of enterprise current situation, predict the future or to make the right decision to provide accurate information or application on the basis of economic subjects.

### **2.1.2 Goals of Financial Analysis**

We need to evaluate company's operations, expend management, credit policy and creditworthiness etc. It means formulating the assessment of the company's present and future financial position (financial health).

1. Profitability - its ability to earn income and sustain growth in both the short- and long-term. A company's degree of profitability is usually based on the income statement, which reports on the company's results of operations;

2. Solvency - its ability to pay its obligation to creditors and other third parties in the long-term

3. Liquidity - its ability to maintain positive cash flow, while satisfying immediate obligations.

*Both 2 and 3 are based on the company's balance sheet, which indicates the financial condition of a business as of a given point in time.*

4. Stability - the firm's ability to remain in business in the long run, without having to sustain significant losses in the conduct of its business. Assessing a company's stability requires the use both of the income statement and the balance sheet, as well as other financial and non-financial indicators etc.

## **2.2 Sources of Financial Analysis at This Thesis**

The normal sources of financial analysis include financial data (from Balance Sheet, P/L, Cash Flow etc), market data (securities prices, industry statistics etc), economic data (GDP, producer price index, consumer price index etc).

We get these details from annual report of HUAWEI and Internet liked discussion of professional assessing company, some report of media, my observation etc. Certainly, the most details which it will be introduced and analyzed in Balance Sheet, Income Statement and Statement of cash flow from HUAWEI's annual report.

### **2.2.1 Balance Sheet**

Balance Sheet (Balance Sheet) is the main accounting statements also called financial condition table, indicated the enterprise financial situation (assets, liabilities and owner's equity situation) for a certain date (usually in the form of various accounting final). In

addition the report function are to the enterprise internal debugging, direction of management, preventing from disadvantages and also can let all readers to understand the status of the enterprise management in the shortest time.

In financial accounting, a balance sheet or statement of financial position is a summary of the financial balances of a sole proprietorship, a business partnership, a corporation or other business organization, such as an LLC (Limited Liability Company) or an LLP (limited liability partnership). Assets, liabilities and ownership equity are listed as of a specific date, such as the end of its financial year. A balance sheet is often described as a "snapshot of a company's financial condition". Of the four basic financial statements, the balance sheet is the only statement which applies to a single point in time of a business' calendar year.

A standard company balance sheet has three parts: assets, liabilities and ownership equity. The main categories of assets are usually listed at the first, and typically in order of liquidity. Assets are followed by the liabilities. The difference between the assets and the liabilities is known as equity or the net assets or the net worth or capital of the company and according to the accounting equation, net worth must equal assets minus liabilities.

$$\text{Assets} = \text{Liabilities} + \text{Equity} \quad (2.1)$$

### **2.2.2 Income Statement**

An income statement (US English) or profit and loss account (UK English) (also referred to as a profit and loss statement (P&L), revenue statement, statement of financial performance, earnings statement, operating statement, or statement of operations) is one of the financial statements of a company and shows the company's revenues and expenses during a particular period. It indicates how the revenues (money received from the sale of products and services before expenses are taken out, also known as the "top line") are transformed into the net income (the result after all revenues and

expenses have been accounted for, also known as "net profit" or the "bottom line"). It displays the revenues recognized for a specific period, and the cost and expenses charged against these revenues, including write-offs (e.g., depreciation and amortization of various assets) and taxes. The purpose of the income statement is to show managers and investors whether the company made or lost money during the period being reported.

In other words, Income Statement Is a dynamic financial records of the company operating performance during a period of time, reflect the period of sales revenue, cost of sales, operating expenses and tax status and report the results for the company to achieve profits or losses. It can provide report readers with the relevant information for a rational economic decision-making, and can be used to analyze the causes of profit change of increase or decrease, the company's operating costs, making investment value evaluation etc.

$$\text{Profit} = \text{Revenue} - \text{Cost} \quad (2.2)$$

### **2.2.3 Statement of Cash Flow**

In financial accounting, a cash flow statement, also known as statement of cash flows, is a financial statement that shows how changes in balance sheet accounts and income affect cash and cash equivalents, and breaks the analysis down to operating, investing, and financing activities. Essentially, the cash flow statement is concerned with the flow of cash in and out of the business. The statement captures both the current operating results and the accompanying changes in the balance sheet. As an analytical tool, the statement of cash flows is useful in determining the short-term viability of a company, particularly its ability to pay bills. International Accounting Standard 7 (IAS 7), which is the International Accounting Standard that deals with cash flow statements.

Cash Flow Statement's content is consistent with the balance sheet and income statement. Through the Cash Flow Statement, can be summarized that it reflect some influence in operating activities, investing activities and financing activities on corporate cash flow. And it can provide a better basis in evaluation of enterprise's profits, financial position and financial management, than the traditional income statement.

## **2.3 Common-size Analysis**

Common-size analysis, as used in vertical analysis of financial statements, an item is used as a base value and all other accounts in the financial statement are compared to this base value. It is to analyze the financial statements data changes over the time, aimed at identifying the trends and major differences.

There are 2 types of this analysis methods, one is *horizontal common-size analysis* that analyze the evolution of financial statements data over the time or their changes with respect to a given period as a benchmark, another one is *vertical common-size analysis* that analyze of the changes in the proportions of selected benchmarks liked total revenues, total assets, total liabilities etc.

We need combine together to achieve efficient financial analysis.

### **2.3.1 Horizontal Common-size Analysis**

Horizontal common-size analysis is one method of financial analysis of the situation that reflect the corporate financial position of the reporting period (that is also the financial statements details) compares with information reflect the enterprise early or history of a period of financial position and study the changes in the development of all their results of operations or financial condition.

The basic element of the horizontal common-size analysis is comparing report's common-size resources with different periods.

In generally horizontal common-size analysis does not refer to a single index comparison, but it is comprehensive comparative analysis of statements reflect. Changes in the number of formula: change in quantity = analysis period actual number - early the same indicators actual number and rate of change in the formula: Rate of change (%) = change in quantity / the actual number of early  $\times 100\%$  (the early stage of formula said can be last year, may also refer to the previous year).

A horizontal analysis provides you with a way to compare your numbers from one period to the next, using financial statements from at least two distinct periods. Each line item has an entry in a current period column and a prior period column. Those two entries are compared to show both the dollar difference and percentage change between the two periods.

Horizontal analysis focuses on trends and changes in financial statement items over time. Along with the dollar amounts presented in the financial statements, horizontal analysis can help a financial statement user to see relative changes over time and identify positive or perhaps troubling trends.

The value of horizontal analysis lies in its usefulness in comparing the results of one company over time to determine whether its financial situation is improving. It is also useful for comparing the results of multiple companies in the same industry to determine which company has the best performance over time. It is most useful when comparing companies in the same industry, because metrics such as gross margin can vary widely from one industry to another.

### **2.3.2 Vertical Common-size Analysis**

The vertical common-size analysis is an analysis method it can be used for the analysis of financial information. Each of data table will compares with overall (or statements of the total) to understand how important it is in the entirety in a financial statement. We can understand the development of the enterprise operation and the speed of the development and progress through this vertical common-size analysis.

Vertical common-size analysis shows you the relationships among components of one financial statement, measured as percentages. It is the procedure of preparing and presenting common size statements and is one that shows the items appearing on it in percentage form as well as in dollar form. Each item is stated as a percentage of some total of which that item is a part. Key financial changes and trends can be highlighted by the use of common size statements.

All of the amounts for a given year are converted into percentages of a key financial statement component in this method.

## **2.4 Financial Ratios Analysis**

A financial ratio (or accounting ratio) is a relative magnitude of two selected numerical values taken from an enterprise's financial statements. Often used in accounting, there are many standard ratios used to try to evaluate the overall financial condition of a corporation or other organization. Financial ratios may be used by managers within a firm, by current and potential shareholders (owners) of a firm, and by a firm's creditors. Financial analysts use financial ratios to compare the strengths and weaknesses in various companies.

Values used in calculating financial ratios are taken from the balance sheet, income statement, statement of cash flows or (sometimes) the statement of retained earnings. These comprise the firm's "accounting statements" or financial statements. The statements' data is based on the accounting method and accounting standards used by the organization.

Financial ratios quantify many aspects of a business and are an integral part of the financial statement analysis. Financial ratios are categorized according to the financial aspect of the business which the ratio measures. Liquidity ratios measure the availability of cash to pay debt. Activity ratios measure how quickly a firm converts non-cash assets to cash assets. Solvency ratios measure the firm's ability to repay long-term debt. Profitability ratios measure the firm's use of its assets and control of its expenses to generate an acceptable rate of return. Market ratios measure investor response to owning a company's stock and also the cost of issuing stock. These are concerned with the return on investment for shareholders, and with the relationship between return and the value of an investment in company's shares.

Ratio Analysis enables the business owner/manager to spot trends in a business and to compare its performance and condition with the average performance of similar businesses in the same industry. To do this compare your ratios with the average of businesses similar to yours and compare your own ratios for several successive years, watching especially for any unfavorable trends that may be starting. Ratio analysis may provide the all-important early warning indications that allow you to solve your business problems before your business is destroyed by them.

Financial ratios can evaluate earnings changes of investment each year and also compare the differences of different enterprises in a certain point and a same industry. Financial ratio analysis can eliminate the influence of size, used to compare the benefits and risks of different enterprises, so as to help investors and creditors to make sensible decisions.



### 2.4.1 Profitability Ratios

Profitability ratios measure the firm's use of its assets and control of its expenses to generate an acceptable rate of return. They measure the ability to generate profit from invested capital in the form of return during a period. The return is expressed as percentage.

The ratio is the most important ratio for a company. The ratio be direct related to the profit, everybody concern this. It can give some information to the manager, shareholder and the investors. The higher the profitability ratios mean the better competitive position of the company.

- **Operating Profit Margin**

In business, operating margin — also known as operating income margin, operating profit margin and return on sales (ROS)— is the ratio of operating income ("operating profit" in the UK) divided by net sales, usually presented in percent.

$$\text{Operating Profit Margin} = \frac{\text{Operating Profit}}{\text{Revenues}} \times 100\% \quad (2.3)$$

Net profit measures the profitability of ventures after accounting for all costs. Return on sales (ROS) is net profit as a percentage of sales revenue. . . . ROS is an indicator of profitability and is often used to compare the profitability of companies and industries of differing sizes. Significantly, ROS does not account for the capital (investment) used to generate the profit. In a survey of nearly 200 senior marketing managers, 69 percent responded that they found the "return on sales" metric very useful.

- **Net Profit Margin**

Profit margin is net profit margin or net profit ratio all refer to a measure of profitability. It is calculated by finding the net profit as a percentage of the revenue.

$$\text{Net Profit Margin} = \frac{\text{Net Profit}}{\text{Revenues}} \times 100\% \quad (2.4)$$

$$\text{Net Profit} = \text{Revenue} - \text{Cost} \quad (2.5)$$

The profit margin is mostly used for internal comparison. It is difficult to accurately compare the net profit ratio for different entities. Individual businesses' operating and financing arrangements vary so much that different entities are bound to have different levels of expenditure, so that comparison of one with another can have little meaning. A low profit margin indicates a low margin of safety: higher risk that a decline in sales will erase profits and result in a net loss, or a negative margin.

- **Return On Assets (ROA)**

The return on assets (ROA) percentage shows how profitable a company's assets are in generating revenue.

ROA can be computed as (by a way):

$$\text{Return On Assets (ROA)} = \frac{\text{Net Profit}}{\text{Total Assets}} \times 100\% \quad (2.6)$$

By another way:

$$\text{Return On Assets (ROA)} = \frac{\text{Operating Profit}}{\text{Total Assets}} \times 100\% \quad (2.7)$$

This number tells you what the company can do with what it has, i.e. how many dollars of earnings they derive from each dollar of assets they control. It's a useful number for comparing competing companies in the same industry. The number will vary widely across different industries. Return on assets gives an indication of the capital intensity of the company, which will depend on the industry; companies that require large initial investments will generally have lower return on assets.

Return on assets is an indicator of how profitable a company is before leverage, and is compared with companies in the same industry. Since the figure for total assets of the

company depends on the carrying value of the assets, some caution is required for companies whose carrying value may not correspond to the actual market value. Return on assets is a common figure used for comparing performance of financial institutions (such as banks), because the majority of their assets will have a carrying value that is close to their actual market value. Return on assets is not useful for comparisons between industries because of factors of scale and peculiar capital requirements (such as reserve requirements in the insurance and banking industries).

Return on assets is one of the elements used in financial analysis using the Du Pont Identity.

- **Return On Equity (ROE)**

Return on equity (ROE) measures the rate of return on the ownership interest (shareholders' equity) of the common stock owners. It measures a firm's efficiency at generating profits from every unit of shareholders' equity (also known as net assets or assets minus liabilities). ROE shows how well a company uses investment funds to generate earnings growth. ROEs between 15% and 20% are generally considered good.

$$\text{Return On Equity (ROE)} = \frac{\text{Net Profit}}{\text{Equity}} \times 100\% \quad (2.8)$$

ROE is equal to a fiscal year's net income (after preferred stock dividends but before common stock dividends) divided by total equity (excluding preferred shares), expressed as a percentage. As many financial ratios, ROE is best used to compare companies in the same industry.

High ROE yields no immediate benefit. Since stock prices are most strongly determined by earnings per share (EPS), you will be paying twice as much (in Price/Book terms) for a 20% ROE's company as for a 10% ROE's company.

The benefit comes from the earnings reinvested in the company at a high ROE rate, which in turn gives the company a high growth rate. The benefit can also come as a dividend on common shares or as a combination of dividends and reinvestment in the company. ROE is presumably irrelevant if the earnings are not reinvested.

### 2.4.2 Liquidity Ratios

These ratios measure company's ability of meeting its immediate or short-term liabilities and obligations. It means a company will use his liquid assets repay his short-term liabilities, it is important to guarantee go on. According to the degree of liquidity, we divide into 3 types ratio included current ratio (the lowest liquidity), quick ratio (higher liquidity) and cash ratio (the highest liquidity).

They analyze company's liquid assets (in the form of cash or can be quickly converted in cash) and short-term liabilities and obligations. If the ratio is lower than need, it must borrow for payback.

They are related to liquidity, risks and return. If a ratio is bigger than 1, we can easily pay back the liabilities and the risk of payment is lower, but it is not good to keep the liquidity ratio as high as possible because of higher liquidity lower return.

- **Current Ratio**

The current ratio is a financial ratio that measures whether or not a firm has enough resources to pay its debts over the next 12 months. It compares a firm's current assets to its current liabilities. It is expressed as follows:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Short-term Liabilities}} \quad (2.9)$$

The current ratio is an indication of a firm's market liquidity and ability to meet creditor's demands. Acceptable current ratios vary from industry to industry and are generally between 1.5 and 3 for healthy businesses. If a company's current ratio is in this range, then it generally indicates good short-term financial strength. If current liabilities exceed current assets (the current ratio is below 1), then the company may have problems meeting its short-term obligations. If the current ratio is too high, then the company may not be efficiently using its current assets or its short-term financing facilities. This may also indicate problems in working capital management.

Low values for the current or quick ratios (values less than 1) indicate that a firm may have difficulty meeting current obligations. Low values, however, do not indicate a critical problem. If an organization has good long-term prospects, it may be able to borrow against those prospects to meet current obligations. Some types of businesses usually operate with a current ratio less than one. For example, if inventory turns over much more rapidly than the accounts payable become due, then the current ratio will be less than one. This can allow a firm to operate with a low current ratio.

- **Quick Ratio**

In finance, the Acid-test or quick ratio or liquid ratio measures the ability of a company to use its near cash or quick assets to extinguish or retire its current liabilities immediately. Quick assets include those current assets that presumably can be quickly converted to cash at close to their book values. A company with a Quick Ratio of less than 1 cannot currently pay back its current liabilities.

$$\text{Quick Ratio} = \frac{\text{Cash} + \text{Short-term Investments} + \text{Receivables}}{\text{Short-term Liabilities}} \quad (2.10)$$

Note that Inventory is excluded from the sum of assets in the Quick Ratio, but included in the Current Ratio. Ratios are tests of viability for business entities but do not give a complete picture of the business' health. If a business has large amounts in Accounts

Receivable which are due for payment after a long period (say 120 days), and essential business expenses and Accounts Payable due for immediate payment, the Quick Ratio may look healthy when the business is actually about to run out of cash. In contrast, if the business has negotiated fast payment or cash from customers, and long terms from suppliers, it may have a very low Quick Ratio and yet be very healthy.

Generally, the acid test ratio should be 1:1 or be higher, however this varies widely by industry. In general, the higher the ratio means the greater the company's liquidity (i.e., the better able to meet current obligations using liquid assets).

- **Cash Ratio**

This ratio use the best liquid assets, it is the best conservative ratio. It is quick ratio's numerator minus receivables and direct reflects the abilities of payback.

$$\text{Cash Ratio} = \frac{\text{Cash} + \text{Short-term Marketable Investments}}{\text{Short-term Liabilities}} \quad (2.11)$$

In normal the ratio is the lowest of liquidity ratios. If this ratio is too higher, it means the current assets used in inefficient and get a lower return rate and a higher cost of capital rate.

### 2.4.3 Solvency Ratios

Solvency ratios measure company's ability to meets its long-term obligations and they show a degree of company's debt risks. It can call debt ratios and quantify the firm's ability to repay long-term debt. If the ratios show a bad situation, it means a higher risk for investors, a higher cost of capital for company and a lower optioning chance for the manager.

- **Debt-to-assets Ratio**

Debt Ratio is a financial ratio that indicates the percentage of a company's assets that are provided via debt. It is the ratio of total debt (the sum of current liabilities and long-term liabilities) and total assets (the sum of current assets, fixed assets, and other assets such as 'goodwill').

$$\text{Debt – to – assets Ratio} = \frac{\text{Total Debt}}{\text{Total Equity}} \times 100\% \quad (2.12)$$

For example, a company with \$2 million in total assets and \$500,000 in total liabilities would have a debt ratio of 25%.

The higher the ratio, the greater risk will be associated with the firm's operation. In addition, high debt to assets ratio may indicate low borrowing capacity of a firm, which in turn will lower the firm's financial flexibility. Like all financial ratios, a company's debt ratio should be compared with their industry average or other competing firms.

Total liabilities divided by total assets. The debt/asset ratio shows the proportion of a company's assets which are financed through debt. If the ratio is less than 0.5, most of the company's assets are financed through equity. If the ratio is greater than 0.5, most of the company's assets are financed through debt. Companies with high debt/asset ratios are said to be "highly leveraged," not highly liquid as stated above. A company with a high debt ratio (highly leveraged) could be in danger if creditors start to demand repayment of debt.

- **Debt-to-equity Ratio**

The debt-to-equity ratio (D/E) is a financial ratio indicating the relative proportion of shareholders' equity and debt used to finance a company's assets. Closely related to leveraging, the ratio is also known as Risk, Gearing or Leverage. The two components are often taken from the firm's balance sheet or statement of financial position (so-called book value), but the ratio may also be calculated using market values for both, if

the company's debt and equity are publicly traded, or using a combination of book value for debt and market value for equity financially.

$$\text{Debt – to – equity Ratio} = \frac{\text{Total Debt}}{\text{Total Equity}} \times 100\% \quad (2.13)$$

- **Financial Leverage**

The degree to which an investor or business is utilizing borrowed money. Companies that are highly leveraged may be at risk of bankruptcy if they are unable to make payments on their debt; they may also be unable to find new lenders in the future. Financial leverage is not always bad, however; it can increase the shareholders' return on their investment and there is often tax advantages associated with borrowing also called leverage.

$$\text{Financial Leverage} = \frac{\text{Assets}}{\text{Equity}} \quad (2.14)$$

- **Interest Coverage**

Times interest earned (TIE) or interest coverage ratio is a measure of a company's ability to honor its debt payments. It may be calculated as either EBIT or EBITDA divided by the total interest payable.

$$\text{Interest Coverage} = \frac{\text{EBIT}}{\text{Interest Payment}} \quad (2.15)$$

Interest Charges (payment) = Traditional "charges" refers to interest expense found on the income statement.

Times Interest Earned or Interest Coverage is a great tool when measuring a company's ability to meet its debt obligations. When the interest coverage ratio is smaller than 1, the company is not generating enough cash from its operations EBIT to meet its interest obligations. The Company would then have to either use cash on hand to make up the



difference or borrow funds. Typically, it is a warning sign when interest coverage falls below 2.5 times.

Times interest earned definition and explanation:

The times interest earned ratio indicates the extent of which earnings are available to meet interest payments.

A lower times interest earned ratio means less earnings are available to meet interest payments and that the business is more vulnerable to increases in interest rates.

The times interest earned ratio is included in the financial statement ratio analysis spreadsheets highlighted in the left column, which provide formulas, definitions, calculation, charts and explanations of each ratio.

The times interest earned ratio is listed in our profitability ratios.

#### **2.4.4 Activity Ratios**

Activity ratios measure how well a company uses its assets that mean utilization. The assets efficiency utilization has a direct impact on liquidity. The ratios' details will show the degree of manage assets and use assets and is an indicator of company's efficiency and competition.

The forms of activity ratios include days of turnover and number of turnover.

- **Inventory Turnover**

In accounting, the Inventory turnover is a measure of the number of times inventory is sold or used in a time period such as a year. The equation for inventory turnover equals the Cost of goods sold divided by the average inventory. Inventory turnover is also known

as inventory turns, stock turnover, stock turns, turns, and stock turnover.

$$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}} \quad (2.16)$$

A low turnover rate may point to overstocking, obsolescence, or deficiencies in the product line or marketing effort. However, in some instances a low rate may be appropriate, such as where higher inventory levels occur in anticipation of rapidly rising prices or expected market shortages.

Conversely a high turnover rate may indicate inadequate inventory levels, which may lead to a loss in business as the inventory is too low. This often can result in stock shortages.

Some compilers of industry data (e.g., Dun & Bradstreet) use sales as the numerator instead of cost of sales. Cost of sales yields a more realistic turnover ratio, but it is often necessary to use sales for purposes of comparative analysis. Cost of sales is considered to be more realistic because of the difference in which sales and the cost of sales are recorded. Sales are generally recorded at market value, i.e. the value at which the marketplace paid for the good or service provided by the firm. In the event that the firm had an exceptional year and the market paid a premium for the firm's goods and services then the numerator may be an inaccurate measure. However, cost of sales is recorded by the firm at what the firm actually paid for the materials available for sale. Additionally, firms may reduce prices to generate sales in an effort to cycle inventory. In this article, the terms "cost of sales" and "cost of goods sold" are synonymous.

- **Receivables Turnover**

Receivable Turnover Ratio is one of the accounting activity ratios, a financial ratio. This ratio measures the number of times, on average receivables (e.g. Accounts Receivable) are collected during the period. A popular variant of the receivables turnover ratio is to convert

it into an Average Collection Period in terms of days. Remember that the Receivable turnover ratio is figured as "turnover times" and the Average collection period is in "days".

$$\text{Receivables Turnover} = \frac{\text{Revenues}}{\text{Average Receivables}} \quad (2.17)$$

- **Total Assets Turnover**

Asset turnover is a financial ratio that measures the efficiency of a company's use of its assets in generating sales revenue or sales income to the company.

$$\text{Total Assets Turnover} = \frac{\text{Revenues}}{\text{Total Assets}} \quad (2.18)$$

Companies with low profit margins tend to have high asset turnover, while those with high profit margins have low asset turnover. Companies in the retail industry tend to have a very high turnover ratio due mainly to cutthroat and competitive pricing.

## **2.4.5 Market Ratios**

Market ratios measure investor response to owning a company's stock and also the cost of issuing stock. These are concerned with the return on investment for shareholders, and with the relationship between return and the value of an investment in company's shares based on financial or market data. The ratios are important for the investors of shareholders, it show the return rate of the invest capital, the competition with other same industry companies and the chance of profit increasing.

- **Earnings Per Share (EPS)**

EPS is the amount of earnings per each outstanding share of a company's stock.

In the United States, the Financial Accounting Standards Board (FASB) requires companies' income statements to report EPS for each of the major categories of the income statement: continuing operations, discontinued operations, extraordinary items, and net income.

$$\text{EPS} = \frac{\text{Net Profit}}{\text{Number of Shares Outstanding}} \quad (2.19)$$

The EPS formula does not include preferred dividends for categories outside of continued operations and net income. Earnings per share for continuing operations and net income are more complicated in that any preferred dividends are removed from net income before calculating EPS. This is because preferred stock rights have precedence over common stock. If preferred dividends total \$100,000, then that is money not available to distribute to each share of common stock.

Only preferred dividends actually declared in the current year are subtracted. The exception is when preferred shares are cumulative, in which case annual dividends are deducted regardless of whether they have been declared or not. Dividends in arrears are not relevant when calculating EPS.

- **Price-to-earnings Ratio (P/E)**

The price-to-earnings ratio, or P/E ratio, is an equity valuation measure defined as market price per share divided by annual earnings per share. It can be simplified as the ratio of total market capital value over earnings.

$$\text{P/E Ratio} = \frac{\text{Market Price Per Share}}{\text{EPS}} \quad (2.20)$$

By comparing price and earnings per share for a company, one can analyze the market stock valuation of a company and its shares relative to the income the company is actually generating. Stocks with higher (or more certain) forecast earnings growth will

usually have a higher P/E, and those expected to have lower (or riskier) earnings growth will usually have a lower P/E. Investors can use the P/E ratio to compare the value of stocks: if one stock has a P/E twice that of another stock, all things being equal (especially the earnings growth rate), it is a less attractive investment.[citation needed] Companies are rarely equal, however, and comparisons between industries, companies, and time periods may be misleading. P/E ratio in general is useful for comparing valuation of peer companies in similar sector or group.

Table 2.1: Fed model (show the average forecast during different P/E ratio)

<b>N/A</b>	A company with no earnings has an undefined P/E ratio. By convention, companies with losses (negative earnings) are usually treated as having an undefined P/E ratio, even though a negative P/E ratio can be mathematically determined.
<b>0–10</b>	Either the stock is undervalued or the company's earnings are thought to be in decline. Alternatively, current earnings may be substantially above historic trends or the company may have profited from selling assets.
<b>10–17</b>	For many companies a P/E ratio in this range may be considered fair value.
<b>17–25</b>	Either the stock is overvalued or the company's earnings have increased since the last earnings figure was published. The stock may also be a growth stock with earnings expected to increase substantially in the future.
<b>25+</b>	A company whose shares have a very high P/E may have high expected future growth in earnings, or this year's earnings may be considered to be exceptionally low, or the stock may be the subject of a speculative bubble.

(Resource: [http://en.wikipedia.org/wiki/PE\\_ratio](http://en.wikipedia.org/wiki/PE_ratio))

P/E ratios are highly dependent on capital structure. Leverage (i.e. debt taken on by the company) affects both earnings and share price in a variety of ways, including the leveraging of earnings growth rates, tax effects and impacts on the risk of bankruptcy, and can sometimes dramatically affect the company's results. For example, for two companies with identical operations and taxation regime, and trading at typical P/E ratios, the company with a moderate amount of debt will commonly have a lower P/E than the one with no debt, despite having a slightly higher risk profile, slightly more volatile earnings and (if earnings are increasing) a slightly higher earnings growth rate.

At higher levels of leverage (where the risk of bankruptcy forces up debt costs) or if profits decline substantially (driving up the P/E ratio) the indebted firm will have a higher P/E ratio than an unleveraged firm.

To try to eliminate these leverage effects and better compare the values of the underlying operating assets, it is often preferable to use multiples based on the enterprise value of a company, such as EV/EBITDA, EV/EBIT or EV/NOPAT.

- **Dividend Payout Ratio**

Dividend payout ratio is the fraction of net income a firm pays to its stockholders in dividends.

$$\text{Dividend Payout Ratio} = \frac{\text{Dividends Paid}}{\text{Net Profit}} \quad (2.21)$$

The part of the earnings not paid to investors is left for investment to provide for future earnings growth. Investors seeking high current income and limited capital growth prefer companies with high Dividend payout ratio. However investors seeking capital growth may prefer lower payout ratio because capital gains are taxed at a lower rate. High growth firms in early life generally have low or zero payout ratios. As they mature, they tend to return more of the earnings back to investors. Note that dividend payout ratio is calculated as DPS/EPS.

## **2.5 Pyramidal Decompositions and Influence Quantification**

It is an important method to divide return on equity (ROE) and quantify the influence of components from dividing ROE. We know the profitability ratios are very important in particular return on equity for the shareholders, manage and investors, so the factors of ROE show the return ability and the efficient of investment. Surely it will tell them the company's degree of competition in the industry.

### 2.5.1 Pyramidal Decompositions:

Pyramidal decompositions enable to analyze what drives the value of financial ratios. An example: which factors have an impact on its value or evolution.

The principle is to express selected (basic) ratio as a product of component ratios. And the fundamental example of the pyramidal decomposition is the DuPont Analysis (decompose ROE ratio by three component Ratios).

- **The Basis of DuPont Analysis**

DuPont analysis (also known as the DuPont identity, DuPont equation, DuPont Model or the DuPont method) is an expression which breaks ROE (Return On Equity) into three parts.

$$ROE = \frac{\text{Net Profit}}{\text{Equity}} = \frac{\text{Net Income}}{\text{Revenues}} \times \frac{\text{Revenues}}{\text{Total Assets}} \times \frac{\text{Total Assets}}{\text{Equity}} \quad (2.22)$$

$$ROE = \text{Net Profit Margin} \times \text{Assets Turnover} \times \text{Financial Leverage} \quad (2.23)$$

The Du Pont identity breaks down Return on Equity (that is, the returns that investors receive from the firm) into three distinct elements. This analysis enables the analyst to understand the source of superior (or inferior) return by comparison with companies in similar industries (or between industries).

The Du Pont identity is less useful for industries, such as investment banking, in which the underlying elements are not meaningful. Variations of the Du Pont identity have been developed for industries where the elements are weakly meaningful. (disadvantages)

Du Pont analysis relies upon the accounting identity, that is, a statement (formula) that is by definition true.

There are 3 types different analysis result from 3 different industries:

1. High Turnover Industries

Certain types of retail operations, particularly stores, may have very low profit margins on sales, and relatively moderate leverage. In contrast, though, groceries may have very high turnover, selling a significant multiple of their assets per year. The ROE of such firms may be particularly dependent on performance of this metric, and hence asset turnover may be studied extremely carefully for signs of under-, or, over-performance. For example, same store sales of many retailers is considered important as an indication that the firm is deriving greater profits from existing stores (rather than showing improved performance by continually opening stores).

2. High margin industries

Other industries, such as fashion, may derive a substantial portion of their competitive advantage from selling at a higher margin, rather than higher sales. For high-end fashion brands, increasing sales without sacrificing margin may be critical. The Du Pont identity allows analysts to determine which of the elements is dominant in any change of ROE.

3. High leverage industries

Some sectors, such as the financial sector, rely on high leverage to generate acceptable ROE. Other industries would see high levels of leverage as unacceptably risky. Du Pont analysis enables third parties that rely primarily on the financial statements to compare leverage among similar companies.

- **Further DuPont Analysis**

If we want to separate the effects of taxes and interest, we can decompose the profit margin as follows:

$$\text{Net Profit Margin} = \frac{\text{Net Income}}{\text{Revenues}} = \frac{\text{Net Income}}{\text{EBT}} \times \frac{\text{EBT}}{\text{EBIT}} \times \frac{\text{EBIT}}{\text{Revenues}} \quad (2.24)$$

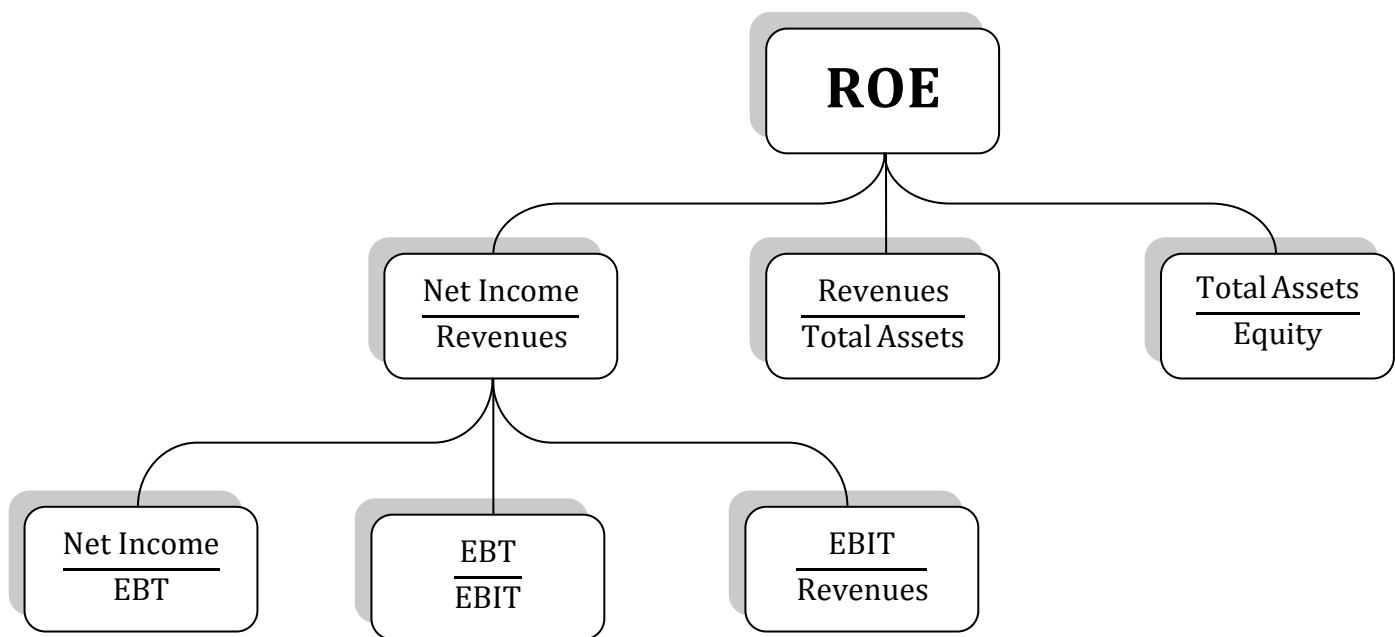


$$\text{Net Profit Margin} = \text{Tax Burden} \times \text{Interest Burden} \times \text{EBIT Margin} \quad (2.25)$$

After substitution into DuPont analysis we get:

$$\text{ROE} = \frac{\text{Net Income}}{\text{EBT}} \times \frac{\text{EBT}}{\text{EBIT}} \times \frac{\text{EBIT}}{\text{Revenues}} \times \frac{\text{Revenues}}{\text{Total Assets}} \times \frac{\text{Total Assets}}{\text{Equity}} \quad (2.26)$$

Figure 2.1: DuPont analysis



### 2.5.2 Influence Quantification

Influence quantification enables to analyze indicators, whose changes have caused change in the basic ratio. According to some details and methods we can quantify, which component ratios contributed to the change in basic ratio at most. It means we can know which component ratio is the best important influence in basic ratio and do most at it for useful and efficient.

There are 4 types of method for quantification of influence. The first one is methods of

gradual changes, the second one is methods of decomposition with surplus, the third one is the logarithmic decomposition method and the last one is functional decomposition method. We will introduce and analyze the method of gradual changes and logarithmic decomposition method.

- **Method of gradual changes**

Method of gradual changes enables to quantify the change in the basic ratio caused by change in the component ratio.

It will show the formula:

$$\begin{aligned}\Delta x_{a_1} &= \Delta a_1 \cdot a_{2,0} \cdot a_{3,0} \\ \Delta x_{a_2} &= a_{1,1} \cdot \Delta a_2 \cdot a_{3,0} \\ \Delta x_{a_3} &= a_{1,1} \cdot a_{2,1} \cdot \Delta a_3\end{aligned}\tag{2.27}$$

Symbols:

x – basic ratio

$\Delta x$  – absolute change in the basic ratio

a – component ratio

$\Delta a$  – absolute change in the component ratio

Ps:  $a_{x,y}$       x means component ratio and y means time.

Advantages:

In this method we don't care whether the numerical value is positive or negative.

Disadvantages:

The sequence must be correct, can't change. The  $a_1$  must be net profit margin, the  $a_2$  must be assets turnover and the  $a_3$  must be financial leverage.

- **Logarithmic Decomposition Method**

The method impacts the i-th component ratio on the change in the basic ratio is calculated as follows:

$$\Delta x_{a_i} = \frac{\ln I_{a_i}}{\ln I_x} \cdot \Delta x \quad (2.28)$$

Symbols:

x – basic ratio

$\Delta x$  – absolute change in the basic ratio

$I_x = x_1/x_2$  – index of change in basic ratio

$I_a = a_1/a_2$  – index of change in component ratio

Advantages:

We need just one formula for the impact quantification regardless of how many component ratios we have. We need not concern the sequence.

Disadvantages:

The numerical value must be positive.

## **3. DESCRIPTION OF HUAWEI COMPANY**

### **3.1 The Company's Overview**

HUAWEI was established in 1987 in Shenzhen China and is the second largest telecommunications provider and a leading provider of global information and communications solutions. Company concentrates on the innovation about continue needs of customers, the opening cooperation. In telecommunications networks, enterprise networks, consumers and cloud computing HUAWEI constructed end-to-end solutions in advantages. And it is committed to provide competitive ICT solutions and services to telecom operators, enterprises and consumers, continue to improving customer experience, to create maximum value for customers. At present, HUAWEI's products and solutions have been applied to more than 140 countries, the services to a third of the population worldwide.



### **3.2 Production and Service**

HUAWEI Technologies (HUAWEI) is a leading provider of global telecommunications solutions, focused on building long-term partnership with operators. They have vigorous employees and strong R&D capability, can rapid response customer needs, provide customized products and end-to-end service and help clients business success.

HUAWEI's products and solutions include mobile, broadband, IP, optical network, telecom value-added services and terminals or other fields, the company is committed to providing full IP integration solutions, to make the end user can enjoy consistent communication experience at any time or any place through any terminal, which is convenient for people's communication and enrich people's life.

HUAWEI's products and solutions has been used in more than 100 countries all over the world, it service the 45 in the world's top 50 operators and a third of the population around the world. Specific include the following ten aspects: 1.wireless access; 2.fixed access; 3.core network; 4.the transport network; 5.data communication; 6.energy and infrastructure; 7.businesses and software; 8.OSS; 9.safe storage; 10.HUAWEI terminal.

HUAWEI offers a broad range of end-to-end product portfolios, including:

1. Telecom Networks:

Radio Access Network: SingleRAN, LTE, GSM, WCDMA, CDMA, TD-SCDMA, WiMAX.

Network: FTTx, DSL, WDM / OTN, MSTP / Hybrid MSTP, Microwave, Router, MSP, PTN and cyber security

Core Network: IMS, Mobile Softswitch, NGN, Packet Core, SDM, PCRF, Cloud, CDN, Signaling Network

Applications and Software: NGBSS, Digital Home, SDP, eCity, Mobile Office

Sites Solutions: Hybrid power supply, Primary power, Antenna & RF, Site & Shelter, Fiber & Copper Infrastructure

2. Global Services End-to-end services solutions, including:

System Integration Solution: Mobile Network Integration, Fixed Network Integration, Data Center Solution, Site Solution

Assurance Solution: Managed Services, Experience Enhancement, Network Safety

Learning Solution: Knowledge Transfer, Huawei Certification, Competency Consulting

3. Devices:

Mobile broadband devices: USB sticks, wireless modems, embedded modules, WiMAX devices

Handsets: UMTS, GSM, CDMA, TD-SCDMA

Convergence devices: fixed / wireless terminals, wireless gateways, digital photo frames, set-top boxes

Video solutions: Telepresence, video conferencing devices Information on the Company

### **3.3 Research, Development and Innovation**

HUAWEI continued increasing the innovation ability of around client demands, insist on a long time input of R&D not less than 10% sales revenue and insisted that R&D spending of 10% on pre-study, continued researching and tracking new technology and new areas. In New technology and new application fields liked FMC, IMS, WIMAX, IPTV etc, HUAWEI have been successfully introduced a solution.

HUAWEI's active response the future network convergence and the trend of business transformation, from the business and application layer, core layer, bearing layer, access layer to the terminal, provide entire network end-to-end solutions, structure the unique advantages of facing to the future network convergence.

HUAWEI set up a research and development institutions, through the intercultural team to implement the strategy of global research and development of asynchronous in Stockholm, Sweden, the United States Dallas, Moscow and Silicon Valley, Bangalore, India, Russia, and China's Shenzhen, Shanghai, Beijing, Nanjing, Xian, Hangzhou and Wuhan etc.

HUAWEI's research and development personnel for products and solutions more than 62000 (44% of a company's total number) and set up 23 institute in Germany, Sweden, United Kingdom, France, Italy, Russia, India and China etc. HUAWEI has also set up 34 joint innovation centers with the leading operators, leading technology into the customer's competitive advantage and business success.

HUAWEI takes a part in the mainstream and support international standards, has made a positive contribution. By the end of 2011, HUAWEI to join 130 industry standards organizations around the world, such as the 3 GPP, the IETF and ITU, OMA, ETSI, IEEE and 3 gpp2, etc. HUAWEI has submitted to the standards organization proposal accumulative total more than 28000, and served as the OMA, CCSA, ETSI and the ATIS authority of the board of directors in more than 180 jobs.

In 2011, HUAWEI got six world-class LTE award, means the HUAWEI obtains the industry's consistent great approval in the LTE technology research and development, commercial practices, standard patents, industrial chain integration etc through continuous investment and great contributions.

In 2011, HUAWEI spent 23.696 billion RMB on R&D, nearly 10 years the research and development costs are more than 100 billion RMB.

HUAWEI's intellectual property department was founded in 1995. Since 2000 HUAWEI domestic patent applications growth doubled speed per year, in 2004 exceed 2000. In terms of foreign patent applications, the cumulative PCT application or foreign patent application has more than 600 pieces and the applications of trademark have more than 600 pieces at home and abroad.

HUAWEI's applications of patent grow six on average a day, for Chinese companies, there is few such a high number of patent applications, and quality also is higher. More than 85% applications of patent are invention.

### **3.4 Development History**

In 1987,

Established in Shenzhen, become a sales agency that product Private Branch Exchange (PBX) in Hongkong.

In 1989,

Get PBX out in independent development.

In 1990,

Starting research PBX technique and extend to business for hotel and small corporation.

In 1992,

Starting research and extend the solutions of Detail Switching (DS) for villages.

In 1995,

The revenue achieved 1.5 billion RMB main from villages of China

Established a department of Intellectual Property Rights and a researching centre in Beijing then getting a certificate of Capability Maturity Model for software (CMM4) in 2003.

In 1996,

Getting Integrated services access network and optical network SDH equipment out.

Signed a contract with Hong Kong Hutchison Whampoa and provide solutions of fixed networks.

Set up Shanghai research center, and has passed the certification of CMM5 level in 2004.

In 1997,

Launched solutions of GSM wireless, and expend market to major cities of China in



1998. With Texas Instruments, Motorola, IBM, Intel, Agere Systems, Sun Microsystems, Altera, Qualcomm, Infineon, and Microsoft set up joint research and development laboratories.

In 1998,

Digital microcells server control switches got the products patent. Set up research center in Nanjing, and in June 2003 passed the certification of the level CMM4.

In 1999,

Set up research center in Bangalore, India. The research and development center in 2001 and 2001 respectively passed the certification of the level CMM4 and the level CMM5.

In 2000,

Set up a research center in the Swedish capital, Stockholm.

The contracts revenue are more than \$2.65 billion, including overseas sales of more than \$100 million.

Set up research and development (R&D) centers in Silicon Valley and Dallas.

In 2001,

Company got \$750 million from sold non-core subsidiaries Avansys to Emerson.

Set up four research and development center in the United States.

It joined the international telecommunication union (ITU).

A system of 10 Gbps SDH began to be commercial in Berlin, Germany. According to RHK, HUAWEI's optical fibers products got market share of first place in the Asia-Pacific region.

In 2002,

Company got revenues about \$552 million in overseas markets. Though from 2001 to 2002 the global telecommunications infrastructure investment has fallen by 50%,

HUAWEI's international sales was increased by 68%, up from \$328 million in 2001 to \$552 million in 2002.

HUAWEI has passed ISO 9000 / TL9000 quality management system certification of UL.

For China mobile deployed the world's first mobile mode of WLAN.

In 2003,

To joint venture with a company with 3 COM, focus on the study of enterprise data network solutions and product enterprise data network equipment.

Deployed 100 million for C&C 08 port all over the world and created the record industry.

Passed the DNV (DET NORSKE VERITAS) of ISO 14001 certification.

In December for the emirates telecommunications (Etisalat) company provides a range of Universal Mobile Telecommunications System (UMTS) services covering the whole country

In 2004,

Set up a joint venture with Siemens and develop mobile communication technology of TD-SCDMA for China.

HUAWEI signed the contract with China Telecom, constructed more than 1200 ADSL line, further consolidate the position of HUAWEI as the biggest strategic partner of China Telecom.

Get two awards issued by Frost & Sullivan, "Asia Pacific 2004 most promising enterprises" and "Asia Pacific 2004 broadband equipment supplier". Frost & Sullivan, a global market research institution, provide relevant the market information and intelligence of emerging high-tech industry.

Get from 29 Banks offer a three-year \$360 million loan, to implement the company's global development plans.

HUAWEI win UMTS network equipment contract for Dutch operator of TELFORT, the contract is worth more than \$25 million, which is the first breakthrough in the Europe.

In 2005,

Overseas sales contract are for the first time more than the domestic sales contract.

*The global framework agreement* signed with Vodafone, officially become Vodafone preferred communications equipment suppliers

It signed a mutual goods consignment agreement With the Marconi company.

It Won the CAT construction for Thailand national about CDMA2000 of 3G network, valued at \$187 million.

Became Australia's operator Optus DSL partners, provides support for high speed data, voice (voice over IP), video broadcast and business services DSL access devices

Becoming the British telecom (BT) preferred network of 21CN suppliers, provide BT21CN network with multiple business network access (MSAN) components and transmission equipment.

Get the permission about the product and sales of mobile phones in China.

Up to June 2005, the company has a total of 10 joint research and development laboratories.

In 2006,

It sold a 49% of H3C share at a price of \$880 million.

Cooperate with MOTOROLA set up joint research and development center in Shanghai, develop the UMTS technology.

Launched a new corporate logo and new logo we focus on customers, fully embodies the innovation, steady growth, and the spirit of harmony.

In 06 years Hong Kong ITU show, HUAWEI launched FMC solution based on All IP network.

HUAWEI mobile softswitch users reached one hundred million. As a global mobile softswitch market leader, HUAWEI mobile softswitch get the first of shipments in the world.

Vodafone choose HUAWEI constructed WCDMA/HSDPA wireless access network for itself in Spain.

EMobile choose HUAWEI deploy of Japan's first HSDPA wireless access network based on IP for itself.

In 2007,

It make a joint venture with Symantec and develop saving and security products and solutions.

With Global Marine cooperation joint venture, provides end-to-end submarine cable network solution.

At the end of 2007 in Europe it became all top operator partners.

In 2008,

It was evaluated by Business Week's top 10 most influential companies.

According to INFORMA consulting report, HUAWEI was ranked third in the world in the field of mobile equipment market.

In 2009,

Wireless access market share ranks among the world's second.

First release the end-to-end solution for 100G from the router to the transmission system.

Get IEEE standards organization *2009 outstanding contribution award*.

It got "new prominent business" award by the financial times and was selected as a Fast Company magazine's top five of the most innovative Company.

Main product implements resource consumption reduced by more than 20% year-on-year, deploy more than 3000 new energy power supply solutions web site all over the world.

Global mobile broadband products ship more than 20 million units, which ranked first in market share according to ABI.

In 2010,

Beyond the Nokia Siemens and Alcatel Lucent, HUAWEI became the world's second-largest telecommunications equipment maker after Ericsson.

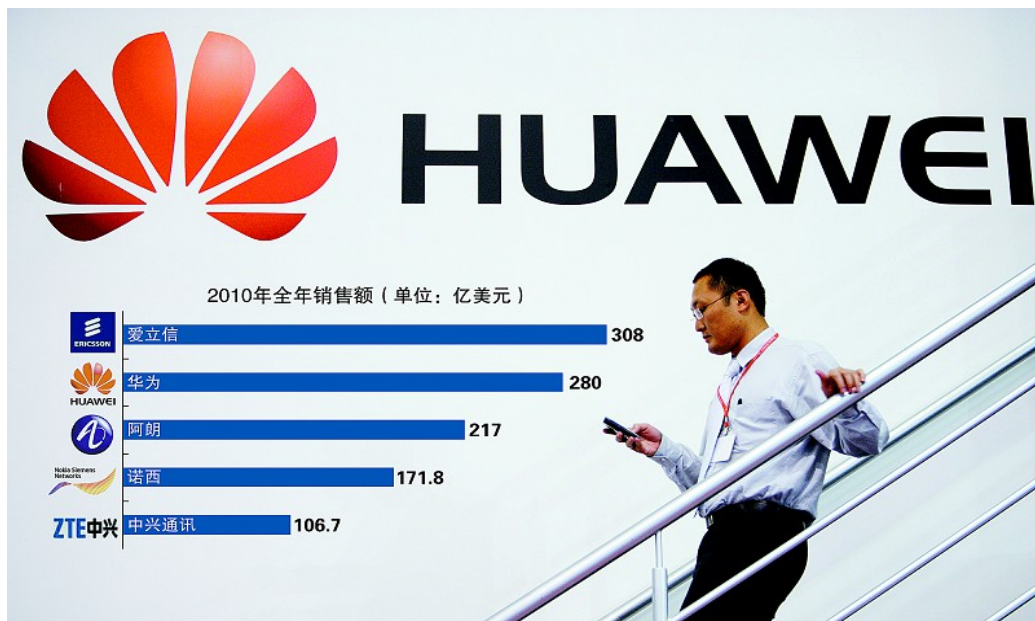
In global it deploy more than 80 SingleRAN commercial networks, of which 28 has commercial release or will release LTE/EPC service.

It found a security certification center in the UK.

HUAWEI join in the United Nations world commission on broadband.

In UK HUAWEI got the economist innovation award for 2010.

Figure 3.1: The rating of telecommunications equipment maker's revenues in 2010



(Resource: <http://hea.qianlong.com/47344/2011/05/11/5824@6998651.htm>)

In 2011,

HUAWEI with Symantec announced that the two sides have reached an agreement to acquire 49% stakes in Symantec.

In cloud computing conference it product IT line, expected putting ten thousand staffs.

HUAWEI was the first batch of "national technology innovation demonstration enterprise".

Put out HUAWEI's HORNOR mobile phone.

HUAWEI got excellent customer service center service award of Chinese financial industry in 2011.

Put out HUAWEI's VISION mobile phone.

In 2012,

Put out HUAWEI's *Ascend P1 S* mobile phone, which is the World's thinnest smart phone.

## **3.5 Enterprise Culture**

### **3.5.1 Core Value**

- Achievement Customer: Customer service is the best important reason of operating, customer's demand is the driving force for the development of HUAWEI.
- Hard Work: HUAWEI don't have any scarce resources to depend on, only hard work to win customer's respect and trust. Adhere to focus on the striver and make fighter get reasonable return.
- Self-Criticism: Only insist on self-criticism, to overcome and continued beyond, to be more likely respected others and cooperate with others, to achieve customer, company, team and individual common development.
- Opening and Enterprising: Positive enterprising, brave in exploitation, insist on opening and innovation.
- Sincere and Trustworthy: Honesty is the most important intangible assets, HUAWEI adhere to win customers through good faith.

- Teamwork: Share success and hardship.

### **3.5.2 Vision & Mission**

- Vision: Enrich people's communication and life.
- Mission: Focus on the challenges and pressures of the customer care, provide competitive communications solutions and services, continues on creating maximum value for customers.
- Strategy: Focus on customers as the center.

## 4. FINANCIAL ANALYSIS OF HUAWEI COMPANY

Here will analyze the financial details of HUAWEI company in this chapter, used these methods that showed in chapter 2. It will show the analysis in 3 parts, included common-size analysis, financial ratio analysis, pyramidal decompositions and influence quantification.

### 4.1 Common-size Analysis

Common-size analysis, as used in vertical analysis of financial statements, an item is used as a base value and all other accounts in the financial statement are compared to this base value. It is to analyze the financial statements data changes over the time, aimed at identifying the trends and major differences.

There are 2 types of this analysis methods, one is *horizontal common-size analysis* that analyze the evolution of financial statements data over the time or their changes with respect to a given period as a benchmark, another one is *vertical common-size analysis* that analyze of the changes in the proportions of selected benchmarks liked total revenues, total assets, total liabilities etc.

We need combine together to achieve efficient financial analysis.

#### 4.1.1 Common-size Analysis of Balance Sheet

- **Horizontal Analysis**

*~First part: Trend analysis of Balance Sheet~*

Viewing the assets, these assets are divided into 2 groups, current assets and non-current assets, and the same method that divide the liabilities into current liabilities and



non-current liabilities. Then first analyze this batch of details based on table 4.1 details of assets and figure 4.1 growth trend of asset.

Table 4.1: Details of assets

(¥'million)	2007	2008	2009	2010	2011
Total Current Assets	69,225	105,728	124,606	152,008	159,615
Total Non-current Assets	10,202	12,512	15,047	26,976	33,668
Total Assets	79,426	118,240	139,653	178,984	193,283

Figure 4.1: Growth trend of asset

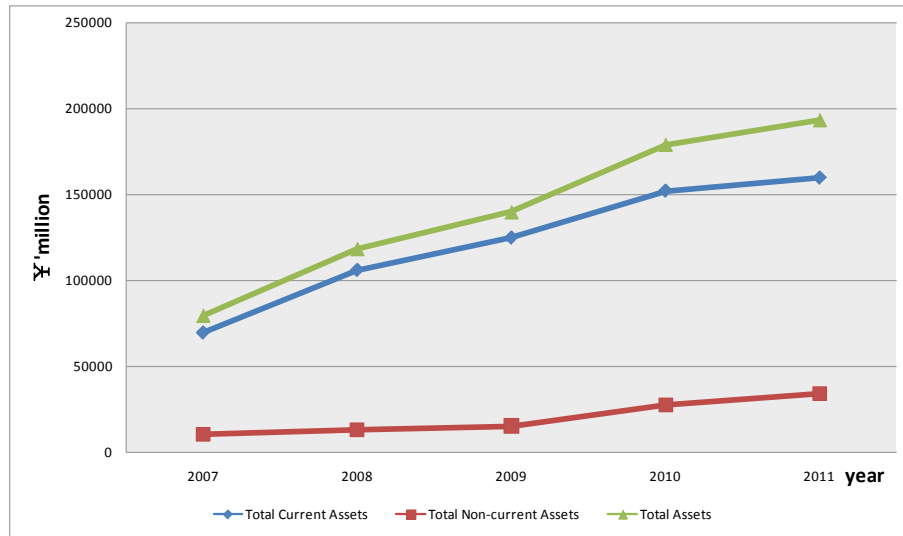
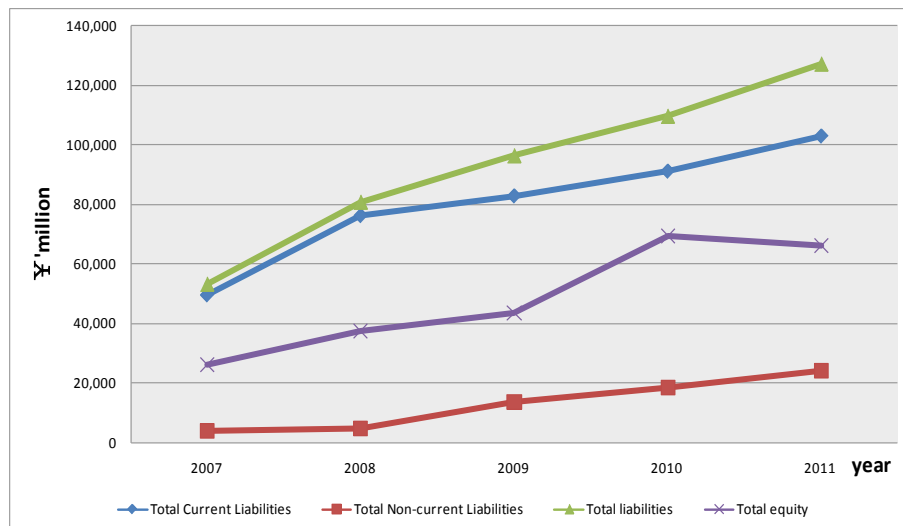


Table 4.2: Details of liabilities and equity

(¥'million)	2007	2008	2009	2010	2011
Total Current Liabilities	49,439	76,140	82,771	91,110	102,934
Total Non-current Liabilities	3,874	4,646	13,566	18,474	24,121
Total liabilities	53,313	80,786	96,337	109,584	127,055
Total equity	26,053	37,454	43,316	69,400	66,228
Total equity and liabilities	79,426	118,240	139,653	178,984	193,283

Figure 4.2: Growth trend of liabilities and equity



In figure 4.1 and the table 4.1, we can see the growth trend of asset is increasing from 79,426 million RMB to 193,283 million RMB during 2007-2011. In figure 4.2 and the table 4.2, these details show the growth trend of liabilities is increasing from 53,313 million RMB to 127,055 million RMB and the equity is increasing from 26,053 million RMB to 66,228 million RMB.

On the whole, all of data are steady growth. The situation of increasing show the company's operating is better and better so the more and more capital is input for some return. Because the HUAWEI is a high technology service enterprise, which the main growth resources are innovation, technique developed and quality of effective service, it is very important information. We know the financial crisis during 2007 to 2010 (main influence) affect the most industries except the high technology service companies are special, because they are great potential industry.

When other industries growth zero even it is decreasing, the investors just can invest in some potential industries and the high technology service enterprise is the best choice. Because we think they can be better by innovation and quality service.

When the unemployment rate keep increasing around world, people must consider the amount and structure of payment in future, it means they will cut down the expenditure and speed up save, it is a heavy hit information for these recession companies. But these types of innovation industry and service industry will be better, they create and search some new demands that focus on the future and the real wants, it means if you want something really, you must pay for it. It is different for other goods that are enough if it isn't necessary. An example, if you plan to travel someplace, you must consider spends whether it is effective, but can you stop use the internet or communication tool liked mobile phone a day? No, you can't.

There is an example about the new wants. If a company advertise their service that you can pay a value as a flight then you will get the chance go to space, can you refuse to try once? Of course it just an example, but you can't negate it, liked the ancients people shouldn't negate we can go to sky a day. So there is much glamour in high technique industry, they can create your wants and your imagine or your wants but no idea. Surely it need time and input.

In addition, we can see the figure 4.2, there is a special change of equity in term of 2009-2010. The growth is much higher than other terms. According to the dada that collected, w can conclude that the reason is HUAWEI obtain a huge of profit in 2010 and distribute a lot of benefit to shareholders (means the dividend distribution policy is more positive). HUAWEI input the most profit finance its capital, through internal financing (it is an important financing way for HUAWEI in last 7 years).

In conclusion said, it is true of great operating during 2007-2011 according the real data from annual report, market research (from rating or media organization) and feelings.

### *~Second part: Analysis of assets change~*

Let we see the analysis of table 4.3, table 4.4 and table 4.5.

Table 4.3: Assets change

	2007-2008		2008-2009		2009-2010		2010-2011	
(¥'million)	absolute change	relative change	absolute change	relative change	absolute change	relative change	absolute change	relative change
Total Current Assets	36,503	53%	18,878	18%	27,402	22%	7,607	5%
Total Non-current Assets	2,310	23%	2,535	20%	11,929	79%	6,692	25%
Total Assets	38,814	49%	21,413	18%	39,331	28%	14,299	8%

Table 4.4: Details of current assets

(¥'million)	2007	2008	2009	2010	2011
Cash and cash equivalents	12,646	21,017	29,232	41,501	57,192
Trade and other receivables	42,855	52,854	63,282	68,734	70,832
Financial assets held for trad	-	-	-	13,957	5,150
Other financial assets	-	8,813	7,145	248	568
Inventories	13,724	23,044	24,947	27,568	25,873

Table 4.5: Details of non-current assets

(¥'million)	2007	2008	2009	2010	2011
Property, plant and equipment	6,516	7,285	8,317	16,008	18,631
Long-term leasehold prepayments	391	-	-	-	-
Intangible assets and goodwill	93	127	553	719	1,378
Trade and other receivables	-	-	-	116	29
Investments	641	490	311	509	683
Other non-current financial asset	-	225	108	85	471
Deferred tax assets	2,560	3,742	5,147	7,210	9,095

In table 4.3, we can see the current assets are higher increasing than the non-current assets in absolute change. The highest increasing rate of total assets is 49% in the term of 2007-2008 on year-on-year basis, which same showed highest increasing term is 2009-2010 in non-current assets with rate of 53% and is 2007-2008 in current assets with rate of 79%.

According to table 4.4 and table 4.5, it shows the answer about the highest increasing of current assets in 2007-2008 and the non-current assets in 2009-2010. We can see the current assets increasing because of a higher change in the cash and cash equivalents and inventories, also understand the reason of higher non-current increasing is the huge change of Property, plant and equipment. As for the change in the total assets, it is a result from the mixture influence between current and non-current assets.

### *~Third part: Analysis of liabilities and equity change~*

Let we see the analysis of table 4.6, table 4.7 and table 4.8.

Table 4.6: Liabilities and equity change

(¥'million)	2007-2008		2008-2009		2009-2010		2010-2011	
	absolute change	relative change	absolute change	relative change	absolute change	relative change	absolute change	relative change
Total Current Liabilities	26,701	54%	6,631	9%	8,339	10%	11,824	13%
Total Non-current Liabilities	772	20%	8,920	192%	4,908	36%	5,647	31%
Total liabilities	27,473	52%	15,551	19%	13,247	14%	17,471	16%
Total equity	11,401	44%	5,862	16%	26,084	60%	-3,172	-5%
Total equity and liabilities	38,814	49%	21,413	18%	39,331	28%	14,299	8%

Table 4.7: Details of current liabilities

(¥'million)	2007	2008	2009	2010	2011
Borrowings	1,087	12,983	7,887	2,695	7,057
Income tax payable	545	1,355	3,696	4,203	2,323
Trade and other payables	46,743	60,528	70,013	82,656	91,592
Provision for warranties	1,064	1,274	1,175	1,556	1,962
Total Current Liabilities	49,439	76,140	82,771	91,110	102,934

Table 4.8: Details of non-current liabilities

(¥'million)	2007	2008	2009	2010	2011
Borrowings	1,615	1,026	8,490	10,264	13,270
Defined benefit post-employment o	-	2,791	3,512	6,266	8,392
Deferred government grants	-	626	933	1,354	1,857
Other payables	2,259	-	-	-	-
Deferred tax liabilities	-	203	631	590	602
Total Non-current Liabilities	3,874	4,646	13,566	18,474	24,121

In table 4.6, we can see the current liabilities are higher increasing than the non-current liabilities in absolute change except 2008-2009. The highest increasing rate of total liabilities is 52% in the term of 2007-2008 on year-on-year basis, which same showed highest increasing term is 2008-2009 in non-current liabilities with rate of 192% (special high) and is 2007-2008 in current assets with rate of 54%. On the other hand the equity highest growth rate is 60% in 2009-2010, and there is a highest increasing in total equity and liabilities with a rate of 49%.

According to table 4.7 and table 4.8, it shows the answer about the highest increasing of current liabilities in 2007-2008 and the non-current liabilities in 2008-2009. We can see the current liabilities increasing because of a higher change in the borrowings item, also understands the reason of higher non-current liabilities increasing is also the huge change of borrowings item. As for the reason of higher change in equity, it is already analyzed in first part.

### **Now we can analyze the combination between second part and third part**

Based on the comparison of HUAWEI annual reports and internet information, we can analyze the situation of higher development.

Viewing from the company's information, HUAWEI make some breakthrough of innovation liked built the first LTE-ready UMTS/HSPA network, structured WCDMA/HSPA and WiMAX network, create the first All-IP mobile network, Built the world's largest GPON FTTH commercial Network and constructed the world's most

advanced and largest SDP platform. All the projects need financing support, if you want transform the innovation into return, company must borrowing more current for financing. It is the reason of highest growth in 2007-2008 current liabilities.

Then make an analysis about current assets change. According to the current liabilities change we can understand there is a reason of the same highest growth in 2007-2008 is financing. Because the HUAWEI can't spend all of the borrowing, it must consider the future risk. Huge profits are another reason, in this term HUAWEI make a huge profit growth it can reinvest into capital which we can search the information from the income statement.

About the change of non-current liabilities in 2008-2009, through search the annual report we can catch the idea. On the one hand, the Group set up a jointly controlled entity with Symantec Corporation ("Symantec"), namely HUAWEI Symantec Technologies Co., Limited ("HUAWEI Symantec"). Pursuant to the contribution agreement dated February 5, 2008, The Group contributed HKD 45,000,000, as well as its internally generated trademark, network storage and security appliance technology (including patents, license and in process research and development projects) and customer relationships with carrying value of Nil in the Group's book for the rest 51% equity interest in HUAWEI Symantec. HUAWEI borrow the money from bank for this project. On the other hand, financial crisis exploded around the world, Chinese central bank made an expansion monetary policy that the scale of base currency is 3,000 billion. The costs of capital are very low, HUAWEI need the low costs achieve sale expansion.

As for the change of non-current assets in 2009-2010, we can get the answer through compare the change equity. The older shareholders reinvest and the newer shareholders invest into HUAWEI, the company has sufficient capital to achieve sale expansion. And they need more capital because of new innovation transform into benefit. It is an advantage for HUAWEI to create product that can be accepted always, means enough return if

enough input.

- **Vertical Analysis**

*~First part: Structure analysis of assets~*

Let us see the analysis of figure 4.3, figure 4.4 and figure 4.5.

Figure 4.3: Structure of assets

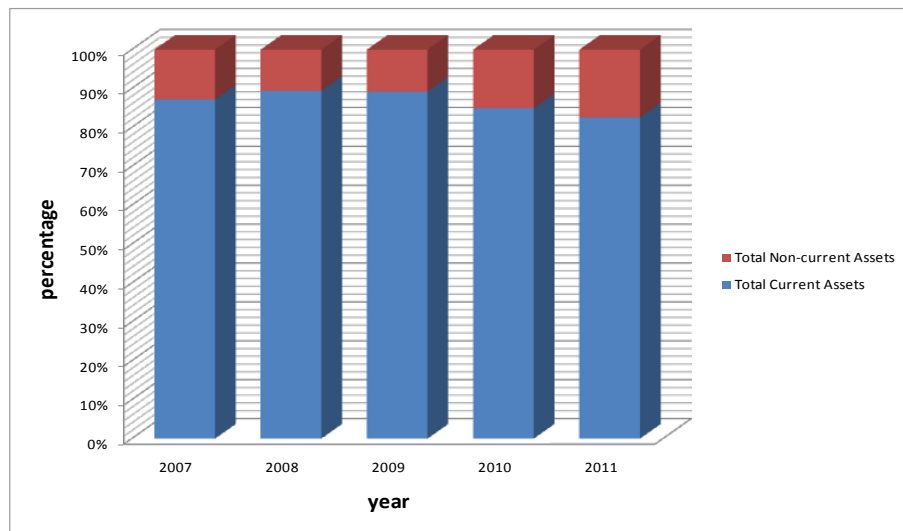


Figure 4.4: Structure of current assets

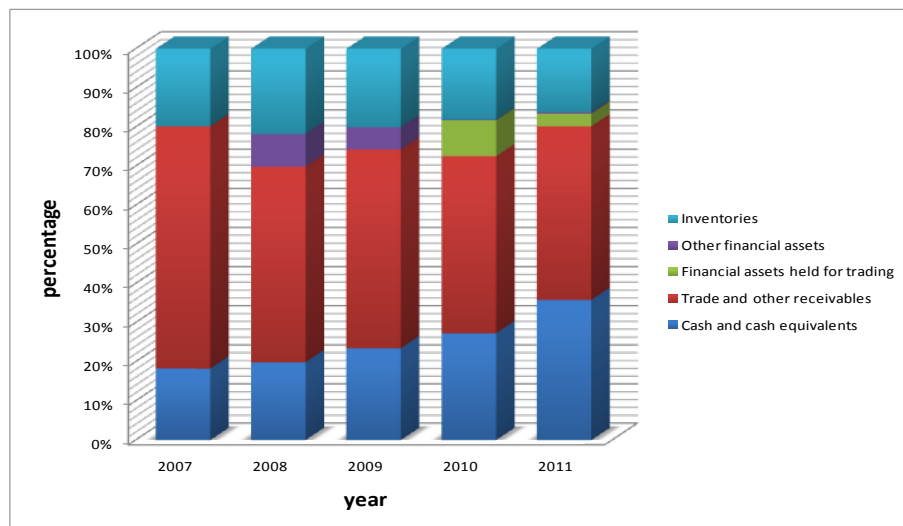
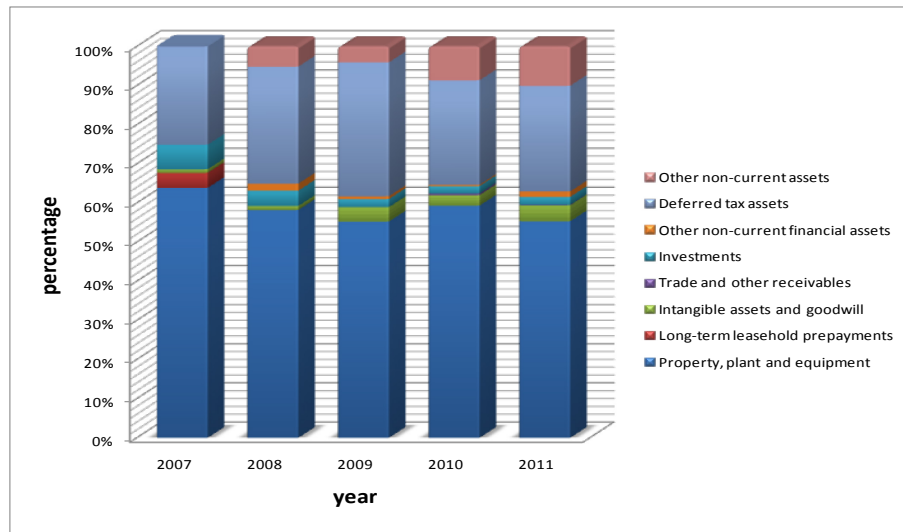


Figure 4.5: Structure of non-current assets



In the figure 4.3, we see the part of current assets is much more than non-current assets in the total assets every year. The part of non-current assets is 10%~20% of total assets, and the part of current assets is 80%~90% of total assets, the difference is very huge. Generally, if a company has more liquid asset which can quickly turn into current asset, the risk for its asset will be relatively low; if a company has more non-liquid asset which cannot turn into current asset quickly, the risk for its asset will be relatively high. So we can say the company has a low degree of risk. As a whole, the structure is stable.

In the figure 4.4, the important item of current assets is trade and other receivables, its share is more than 50% (very high), but it is decreasing during 2007-2011 from 60% to 40%~50%. Other main items are cash equivalents and inventories, it is clear that the cash equivalents is stable growing from 20% to 30%~40% and the item of inventories is stable in 20%. According to the data show, the main part of inventories is materials, which is same with most of producers. As a whole, the structure is some fluctuant.

In the figure 4.5, the item of property, plant and equipment is the most shares of non-current assets, and is stable in a degree of 55%~60%. The second important item is deferred tax assets maybe 25%~30%. Other items are negligible. As a whole, the structure is stable.

Comparing these 3 tables, we can see that the first most share of asset is the item of



trade and other receivables. Why the item is trade and other receivables? Because HUAWEI is a production and service transnational company, most of revenue is come from international trade. They help the cooperation partner structure various kinds of network, provide some solutions for ideas or problems liked communication, work network structure and also can sell the machinery equipment and mobile or fixed equipment. For the type company, it must comply with the business rule liked a classical model of sales on credit, you can't obtain the return immediately instead of just accepting a receivables item.

Continuing, the cash equivalents are so more, because it is saving for payback to payables or borrowings. And it can be another considering for reinvest, when a chance of investment comes. The situation of cash and cash equivalents is steady growth, which means HUAWEI's operating and management are effective and beneficial.

As for the property, plant and equipment, we can see combine with inventories. It is important for production enterprises, because they need plants product goods for selling, and these productions are sold not yet called inventories.

### *~Second part: Structure analysis of liabilities~*

Let we see the analysis of figure 4.6, figure 4.7 and figure 4.8.

Figure 4.6: Structure of liabilities

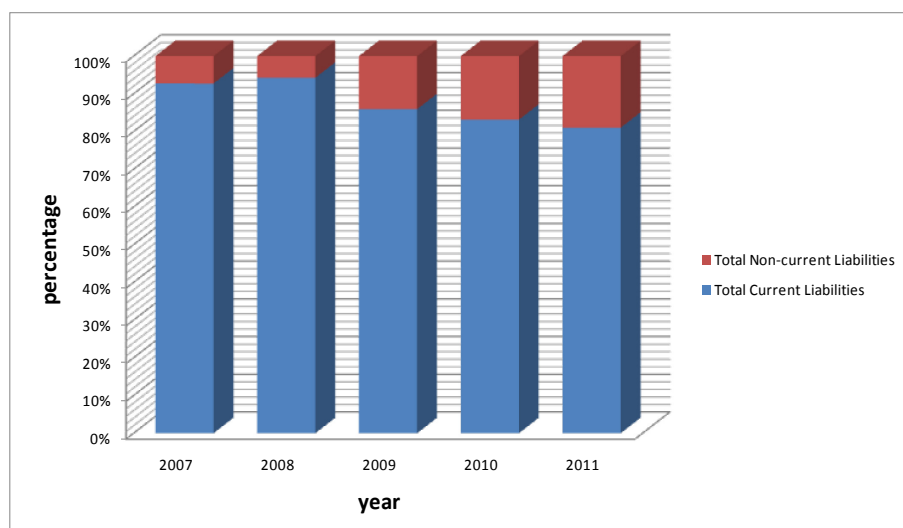


Figure 4.7: Structure of current liabilities

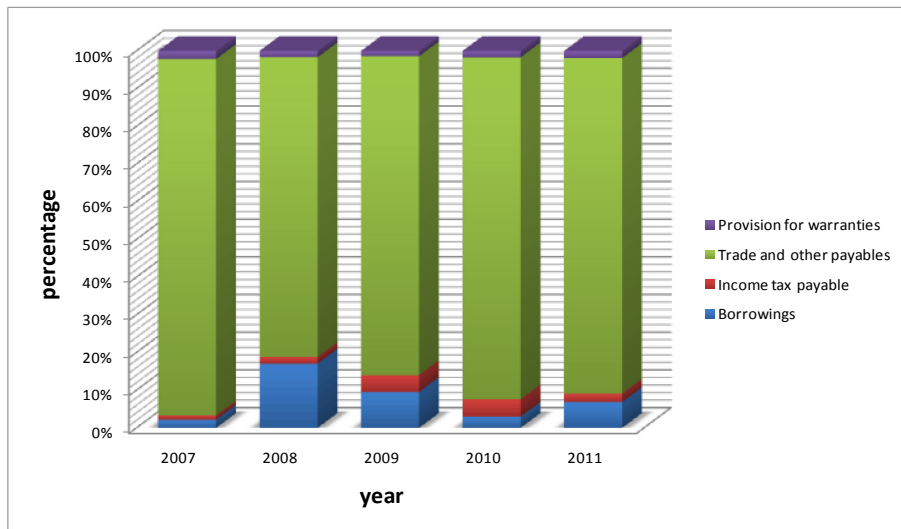
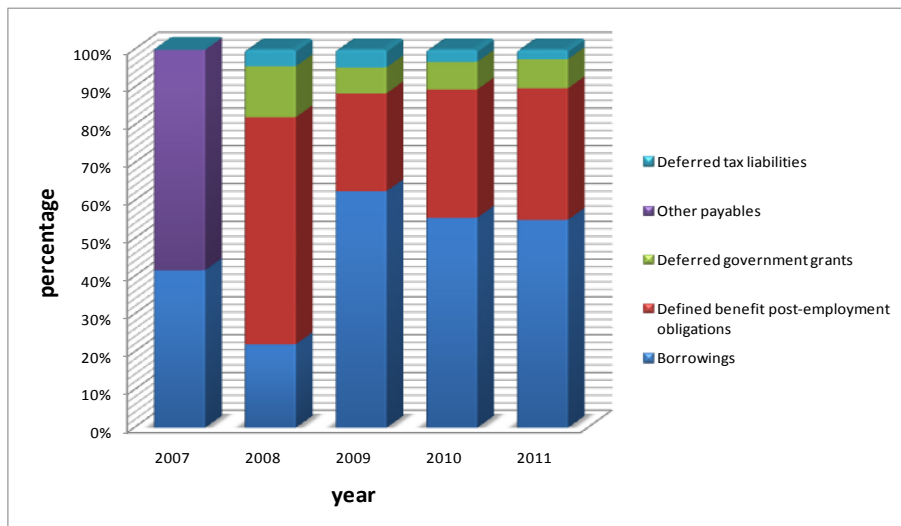


Figure 4.8: Structure of non-current liabilities



In the figure 4.6, we see the part of current liabilities is much more than non-current liabilities in the total liabilities every year. The part of non-current liabilities is 5%~20% of total liabilities, and the part of current liabilities is 80%~95% of total liabilities, the difference is very huge. And we can find a trend the non-current liabilities are steady growth. But as a whole, the structure is stable.

In the figure 4.7, the important item of current liabilities is trade and other payables, which its share is always more than 80% (a huge share). Another main item is borrowings,

and its share is 0%~15%. There is a special increasing of borrowings in 2008, that result from investment demands in 2007-2008 (we will analyze this reason last horizontal part). We can find an item of provision for warranties with little share carefully, this item is important for the company's credit. It must fund this liability for continuous business activities. As a whole, the structure is stable.

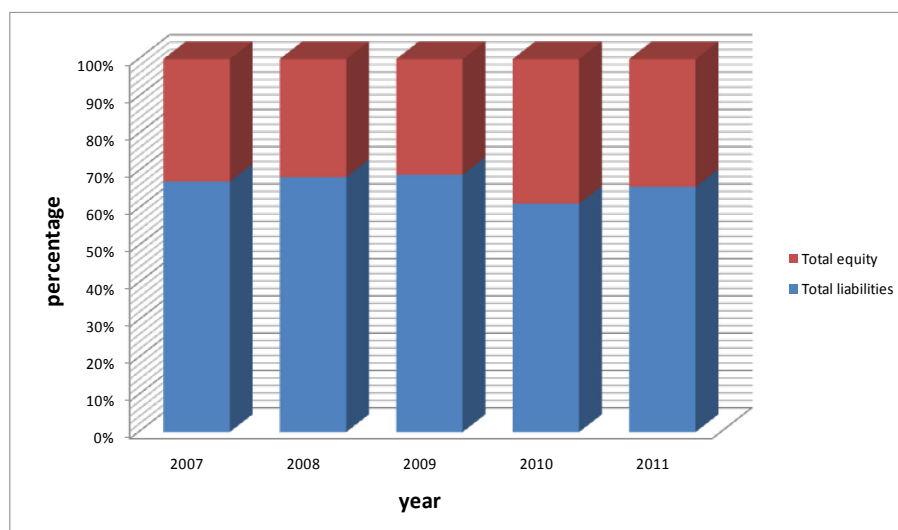
In the figure 4.8, the item of borrowing or defined benefit post-employment obligations is the most shares of non-current liabilities. As a whole, the structure is more fluctuant. Let we see the special structure of 2008. The defined benefit post-employment obligations are more than the borrowings for the first time. It is an appearance of high-speed growth's stuff welfare from overexpansion.

Comparing these 3 tables, we can also see that the first most share of liabilities is the item of trade and other payables. It is the same reason that a materials company must comply with the business rule liked a classical model of sales on credit, manufacturer needn't payback the costs immediately instead of just record a payables item.

### *~Third part: Structure analysis of equity~*

Let we see the analysis of figure 4.9.

Figure 4.9: Structure of equity and liabilities



In figure 4.9, we find the main financing method is debt financing, the share of debt financing maybe twice as much equity financing. Now most of company use a financing method combined debt and stock with some advantages. The debt financing is based on equity, if a company has enough equity capital, and this company can get the credit help as much as it wants. From the picture we can believe HUAWEI have enough equity for credit, which is important for a financial crisis and a chance of investment. It is a consideration included credit, risk and return.

The more about financing method analysis, it will be introduced in financial ratio analysis later.

#### 4.1.2 Common-size Analysis of Income Statement

- **Horizontal Analysis**

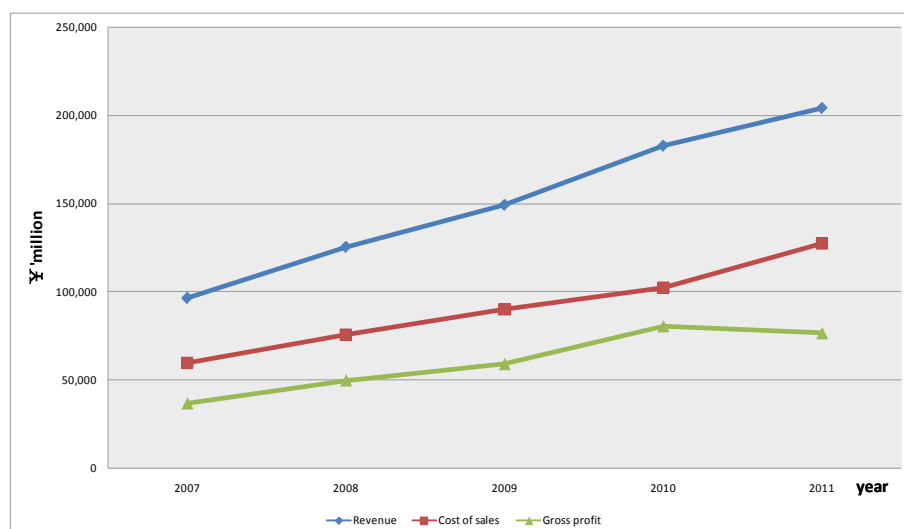
*~First part: Trend analysis of operating~*

Let me analyze the data in table 4.9 and figure 4.10.

Table 4.9: Details of operating without non-primary business

(¥'million)	2007	2008	2009	2010	2011
Revenue	96,301	125,217	149,059	182,548	203,929
Cost of sales	59,525	75,459	90,090	102,195	127,481
Gross profit	36,775	49,758	58,969	80,353	76,448

Figure 4.10: Growth trend of operating



In figure 4.10, the main trend of all data growth is increasing. The change of revenue is from increasing 96,301 million RMB to increasing 203,929 million RMB every year, the change of cost of sales is from increasing 59,525 million RMB to increasing 127,481 million RMB every year and the change of gross profit is from increasing 36,775 million RMB to increasing 76,448 million RMB every year.

On the whole, the revenues are a steady higher growth. In most cases, only the company's main business income is growth, the company profit would be increasing. If a company is faltering on main business income, even keep the profit growth by any other way, which is not normal. Main business revenue growth is the embodiment of the company market competitiveness and market share continue to improve. In some cases, companies' profits are poor performance in the short term, but as long as the main business income can rapid growth, or can effectively expand the market share, which also can bring confidence to investors. So the data of many increasing show there is a great and continuous operating and management in the company. According the annual report, we can see that HUAWEI is successful in sells of production and service during 2007-2011, which is the reason of relative higher speed growth. The result of success is from continuous and more input of research and development.

As for the red line in figure 4.10, we can see the trend result from a lot of factors. The most important factor is the increasing of materials price. Because the aftermath of financial crisis keep influencing the economic resurgence, countries keep quantitative easing policy and proactive fiscal policy, more and more currency go into market result in the rapid growth of price.

In additional, the reason of decelerated growth will be analyzed next part.

*~Second part: Trend analysis of Income Statement~*

Let me analyze the data in table 4.10, table 4.11 and figure 4.11.

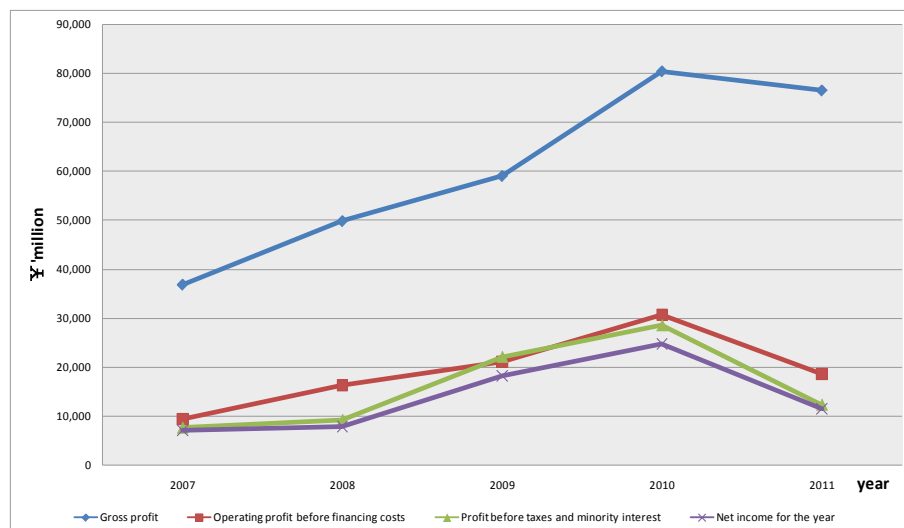
Table 4.10: Details of income

(¥'million)	2007	2008	2009	2010	2011
Gross profit	36,775	49,758	58,969	80,353	76,448
Operating profit before financing costs	9,359	16,197	21,052	30,676	18,582
Profit before taxes and minority interest	7,813	9,381	22,144	28,548	12,457
Net income for the year	7,177	7,848	18,274	24,716	11,647

Table 4.11: Details of financing

(¥'million)	2007	2008	2009	2010	2011
Net finance expense / (income)	1,492	6,623	-1,255	2,118	5,897

Figure 4.11: Growth trend of income



Same it is first described about the trend about profit in figure 4.11. The growth of gross profit keep a steady rate, but the growth of operating profit before financing costs, profit before taxes and net income for the year keeping a degree of 20,000 million RMB with exactly similar. In additional, there is a same decreasing trend of growth in 2010-2011, which is a very important reason why the 3 items look like keeping stable over time.

According to HUAWEI's 2011 annual report, HUAWEI sales revenues are double-digit growth in 2011, but profits deteriorated. HUAWEI's 2011 sales income is 203.93 billion RMB (\$32.4 billion), up 11.71% from the earlier year, less than half of sales revenue

growth (24.7%) last year. Because of the influence included the lower gross profit and the high cost of research and development, HUAWEI get 18.58 billion RMB of operating profit (EBIT) in 2011, down 39.4% year on year. Gross profit decrease 6.5%, from 44% in 2010 to 37.5% in 2011 and development costs increased from 17.65 billion RMB in 2010 to 23.7 billion RMB in 2011, increased 34.2% year-on-year.

In addition, The decline in net profit was largely attributable to an exchange loss of CNY 4,876 million in 2011 (compared to CNY 1,367 million in 2010) increased 256.7% year-on-year, due to the constant appreciation of the RMB (show in table 4.11). At last we can find there are some doubtful accounts with a tiny get back probability. The above factors combined action lead to HUAWEI's net profit decrease 52.9% year on year and net profit margin is only 5.7% but last year net profit margin is 13.5% (the data can be found from financial ratio).

From the huge difference between gross profit and others profit, we can find a fact that there are so many non-primary business costs in HUAWEI. It will be discuss next part.

### ~Third part: Analysis of income change~

Let me analyze the data in table 4.12, table 4.13 and table 4.14.

Table 4.12: Income change

(¥'million)	2007-2008		2008-2009		2009-2010		2010-2011	
	absolute change	relative change	absolute change	relative change	absolute change	relative change	absolute change	relative change
Gross profit	12,983	35%	9,211	19%	21,384	36%	-3,905	-5%
Operating profit before financing costs	6,838	73%	4,855	30%	9,624	46%	-12,094	-39%
Profit before taxes and minority interest	1,568	20%	12,763	136%	6,404	29%	-16,091	-56%
Net income for the year	671	9%	10,426	133%	6,442	35%	-13,069	-53%

Table 4.13: Details of operating with non-primary business

(¥'million)	2007	2008	2009	2010	2011
Revenue	96,301	125,217	149,059	182,548	203,929
Cost of sales	59,525	75,459	90,090	102,195	127,481
Gross profit	36,775	49,758	58,969	80,353	76,448
Research and development expenses	-	10,469	13,340	17,653	23,696
Selling, general and administrative expenses	-	22,422	24,169	31,439	33,770
Operating expenses	26,834	-	-	-	-
Other operating expenses, net	582	670	408	585	400
Operating profit before financing costs	9,359	16,197	21,052	30,676	18,582

Table4.14: Operating change

(¥'million)	2007-2008		2008-2009		2009-2010		2010-2011	
	absolute change	relative change	absolute change	relative change	absolute change	relative change	absolute change	relative change
Revenue	28,916	30%	23,842	19%	33,489	22%	21,381	12%
Cost of sales	15,934	27%	14,631	19%	12,105	13%	25,286	25%
Gross profit	12,983	35%	9,211	19%	21,384	36%	-3,905	-5%
Research and development expenses	10,469	0%	2,871	27%	4,313	32%	6,043	34%
Selling, general and administrative expenses	22,422	0%	1,747	8%	7,270	30%	2,331	7%
Operating expenses	-26,834	-100%	0	0%	0	0%	0	0%
Other operating expenses, net	88	15%	-262	-39%	177	43%	-185	-32%
Operating profit before financing costs	6,838	73%	4,855	30%	9,624	46%	-12,094	-39%

Focus on table 4.12, we can find the highest relative growth of gross profit is in 2007-2008 and 2009-2010 with rate about 36%, the item of operating profit before financing costs is in 2007-2008 with rate 73%, these items of profit before taxes and net income for the year are in 2008-2009 with rate 136% or 133%. In additional focus on 2010-2011, all of the data are negative that reason it is analyzed last part.

Then we analyze the reasons for last conclusions, compared with table 4.11, 4.12 and 4.14 can get the answers.

First HUAWEI make some breakthrough of innovation and cooperation, these items bring great returns to HUAWEI in 2007-2008. Another term of 2009-2010, HUAWEI take lots of loans for investment expansion in 2008-2009 and get the benefit next term. Second we focus on an item of operating expenses in 2007-2008 from table 4.14, the costs of non-primary business decrease because of a huge decrease of operating expenses. Here are some strange data about this item after 2007-2008, that result from a method change of accounting. Third compared with table 4.12 and 4.11, the profits are so more because of a benefit resulted from a huge decrease of net finance expense. HUAWEI is an international trade enterprise, so the exchange fluctuations affect the net profit a lot. On the other hand, lots of interests have to pay back for the bank loans.

- **Vertical Analysis**

~*First part: Structure analysis of revenues*~

Let we see the analysis compared with figure 4.12 and 4.13.



Figure 4.12: Structure of revenue without non-primary business cost

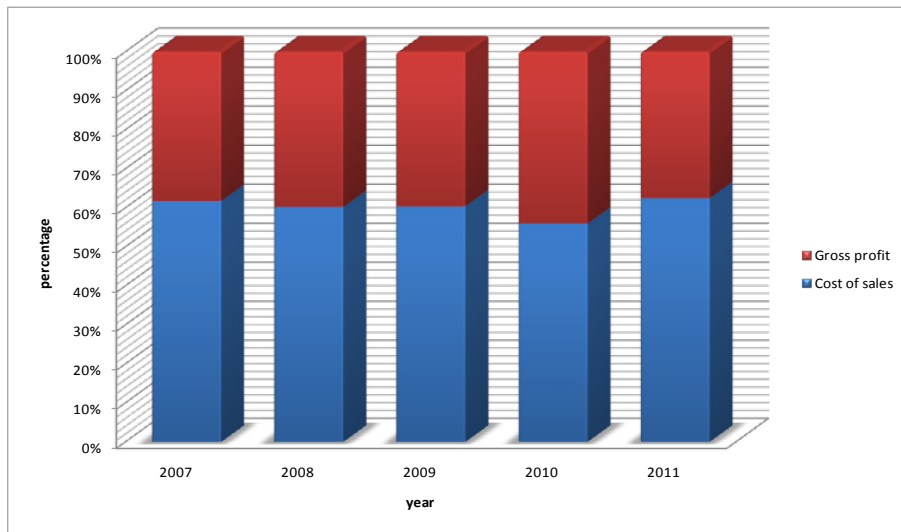
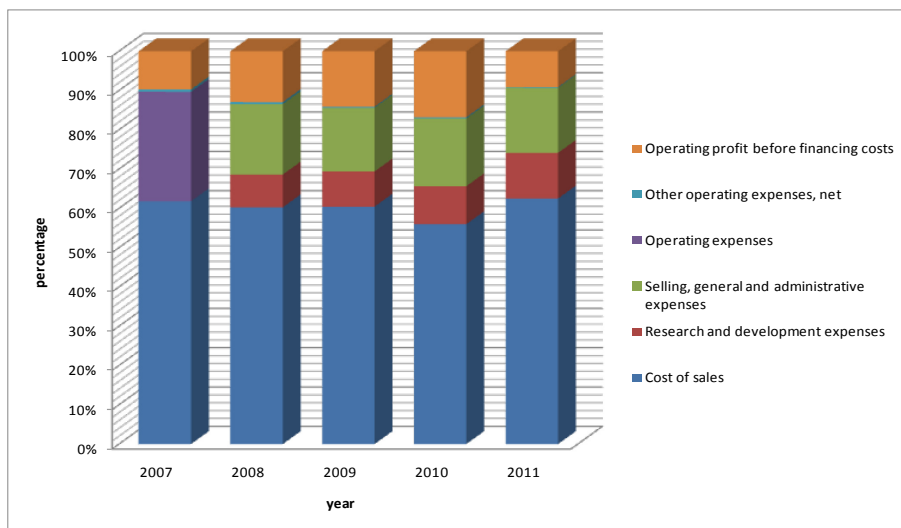


Figure 4.13: Structure of revenue with non-primary business cost



Those profits are reflected on the income statement, included primary business profit (gross profit), operating profit (EBIT), total profit (EBT) and net profit (EAT).

In figure 4.12, it shows the share of gross profit is 40% in revenue and the share of cost of sales is about 60% in revenue. As a whole there 2 items keep a same degree over time and the structure is stable. Main business profit made from primary business income minus primary business cost, also called gross profit. The higher gross profit margin (gross profit/revenue) the stronger ability of expanded reinvest. The ability of company revenues

and earnings expansion will be restrictions with a low gross profit margin that can increase the risk of fluctuations in the performance. Through data analysis, there are some satisfactory performances in HUAWEI.

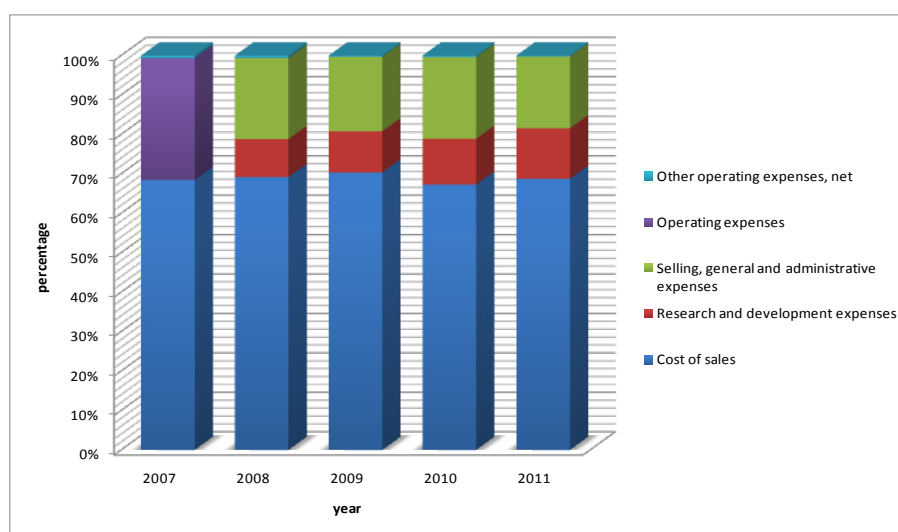
In figure 4.13, we can see the share of operating profit before financing costs (EBIT) is 10%~15% in revenue and the share of non-primary business cost is 25%~30% in revenue. As a whole, the cost burdens are heavy for HUAWEI. Operating profit is the primary business income minus three main business costs and expenses, operating profit margin (EBIT/revenue) is the key to reflect the capacity of company's primary business making benefits. Not only decrease primary business as much as possible, but also need focus on the non-primary business cost, so the final performance can be maximized.

As for the analysis of EBT and EAT in revenue structure, we can't finished that. There are positive numbers and negative numbers in the same table 4.11 simultaneously, so we can't get the data to divide it into finance expense and finance income.

### *~Second part: Structure analysis of business cost~*

Let we see the analysis of figure 4.14.

Figure 4.14: Structure of business cost



For revenue generated company will be required to input various expense, included two parts. One is the cost of sales and another is the so-called three costs, operating expenses, management fees and finance charges.

In figure 4.14, we can see the share of cost of sales is stable 70% in total business cost, the administrative expenses are stable 20% and the R&D expenses are stable 10%. As for the share of operating expenses, it need not consider because of only one year. Cost of sales is the direct costs and expenses for revenue generated, mainly including raw material procurement costs and fixed assets depreciation expense. Depreciation of the generally changed little, more investors need to focus on changes in the cost of raw materials. We can analyze the factors of raw materials increasing in first part of horizontal. Three costs is a measure of internal operation efficiency so investors need to focus on research, usually measured by accounted for proportion of revenue. If the share of three costs in revenue falling or lower than the similar company, which shows that the company has the advantage in internal management efficiency like HUAWEI.

### 4.1.3 Common-size Analysis of Cash Flow Statement

- **Horizontal Analysis**

~*First par: Trend analysis of operating cash flow*~

First analyze the table 4.12, 4.13 and figure 4.15.

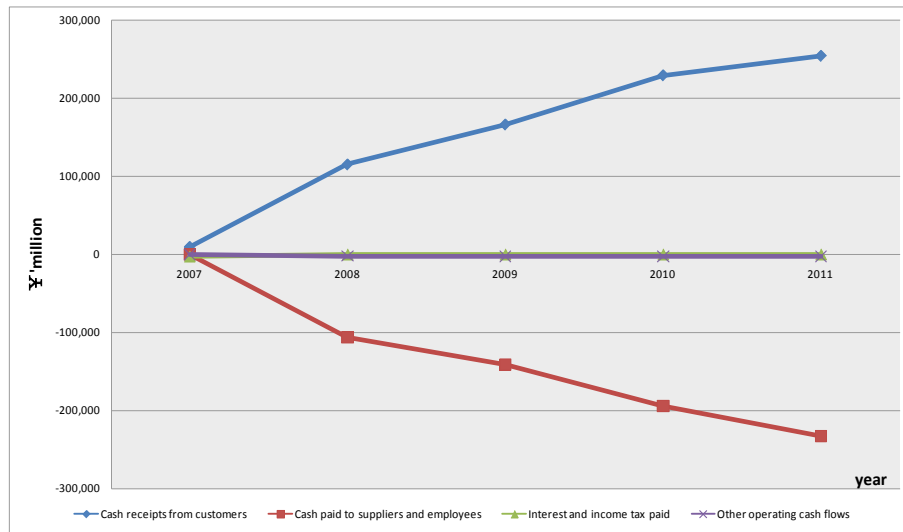
Table 4.12: Details of operating cash flow

(¥'million)	2007	2008	2009	2010	2011
Cash receipts from customers	8,955	114,612	165,802	228,865	253,847
Cash paid to suppliers and employees	-	-105,745	-141,411	-194,205	-233,092
Interest and income tax paid	-2,633	-	-	-	-
Other operating cash flows	-	-2,412	-2,650	-3,105	-2,929

Table 4.13: Operating cash flow change

	2007-2008		2008-2009		2009-2010		2010-2011	
(¥'million)	absolute change	relative change	absolute change	relative change	absolute change	relative change	absolute change	relative change
Cash receipts from customers	105,657	1180%	51,190	45%	63,063	38%	24,982	11%
Cash paid to suppliers and employees	-105,745	0%	-35,666	34%	-52,794	37%	-38,887	20%
Interest and income tax paid	2,633	-100%	0	0%	0	0%	0	0%
Other operating cash flows	-2,412	0%	-238	10%	-455	17%	176	-6%

Figure 4.15: Growth trend of operating cash flow



First focus on the figure 4.15 and table 4.12, we can find the most important items in operating cash flow are cash receipts from customers and cash paid to suppliers and employees, as for others item's amounts are negligible. The trends of cash receipts from customers (cash inflow) and cash paid to suppliers and employees are steady high-speed growth from 9000 million RMB to 250,000 million RMB or 0 (we can sure it is a misunderstand because of a different accounting method) to 230,000 million RMB, and the trend of other items look like a parallel line because of negligible amount. In initial estimates, we can say HUAWEI have an effective operating because of a very low level of non-primary business expenses. In additional, there are some difference between data of 2007 and data of others, which is resulted from a method change of accounting.

The situation of a higher growth in cash receipts and cash paid shows that HUAWEI keep a higher expansion and reinvest through introduce an effective demands and supplies, so the sales of products and service would be increasing fast. In respond to this, HUAWEI need invest a more and more raw materials and wage of employees for productions.

Second focus on the table 4.13, the highest relative change of cash receipts from customers is in 2008-2009, and cash paid to suppliers and employees is in 2008-2009 and 2009-2011 except a term of 2007-2008 (it's explained last paragraph, it can't be compared). In additional, the growth rate decrease in 2010-2011 showed in cash receipts and cash paid.

Why the situation caused? There is a same reason from a return of expansion and investment in cash receipts from customers. Another reason if considering the term of 2007-2008 is the breakthrough of R&D and abroad cooperation. Then a explain is the increasing price of raw materials and wage increasing for higher growth of cash paid. As for the decrease growth level in 2010-2011, it is result from input decrease from the slow growth of net income.

*~Second part: Trend analysis of net cash flow item~*

Second analyze the table 4.14, 4.15 and figure 4.16.

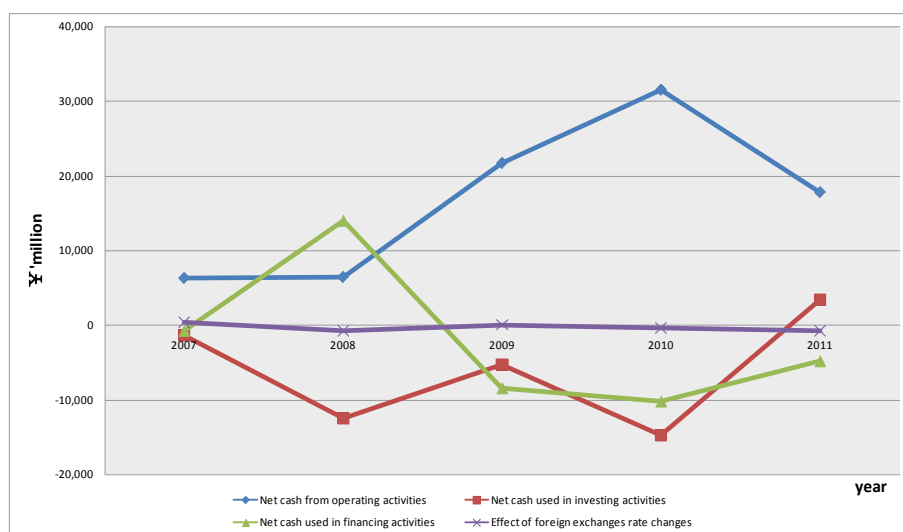
Table 4.14: Details of each net cash flow items

(¥'million)	2007	2008	2009	2010	2011
Net cash from operating activities	6,322	6,455	21,741	31,555	17,826
Net cash used in investing activities	-1,318	-12,477	-5,219	-14,708	3,421
Net cash used in financing activities	-709	13,992	-8,384	-10,152	-4,774
Effect of foreign exchanges rate changes	431	-779	81	-407	-782

Table 4.15: Net cash flow of each items change

	2007-2008		2008-2009		2009-2010		2010-2011	
(¥'million)	absolute change	relative change	absolute change	relative change	absolute change	relative change	absolute change	relative change
Net cash from operating activities	133	2%	15,286	237%	9,814	45%	-13,729	-44%
Net cash used in investing activities	-11,159	847%	7,258	-58%	-9,489	182%	18,129	-123%
Net cash used in financing activities	14,701	-2073%	-22,376	-160%	-1,768	21%	5,378	-53%
Effect of foreign exchanges rate changes	-1,210	-281%	860	-110%	-488	-602%	-375	92%

Figure 4.16: Growth trend of net cash flow items



Enterprise's cash flow is made from three parts of operating activities, investment activities and financing activities. Analyze the amount and the structure of cash flow, can understand the cause and effect of cash receipts and cash disbursements; can evaluate enterprise operating performance, liquidity and ability of financing.

Viewing from the table 4.14 and figure 4.16, the net cash flow of operating is always positive with an increasing trend but decrease in 2010-2011. The amount of net cash flow of investment is stable outflow about 9,000 million RMB but is inflow in 2010-2011. The net cash flow of financing is stable out flow about 6,000 million RMB but there is a huge inflow in 2007-2008. As for the effect of foreign exchanges rate changes looks like parallel to zero line. As a whole, the growth fluctuate is frequent.

As the explanation of net operating cash flow decrease, is resulted from the net income decrease analyzed it in common-size analysis of income statement. The net investment cash flow change into positive number, which is resulted from a slower input and some get back of investment. As for the much positive increase of net financing cash flow, it is resulted from a lot of current borrowings for expansion. In 2008-2009, Chinese market full will currency of a low costs (most countries and regions make a QE plan). This is a god-given chance of expansion through lower interest rate loans, so HUAWEI take a lot of long-time loans for increase the scale of company and productive forces.

Viewing from the table 4.15, we can see the highest growth of net operating cash flow is in 2008-2009 with a rate more than 200%. The return of input in 2008 is the reason of operating cash inflow rapid increase. Last year, HUAWEI take a lot of short-term loans for changing a lot of new innovation into benefit and structure some new cooperation at broad. The reason of operating cash inflow decrease is explained last paragraph. As for the net investing cash flow, the net financing cash flow and the effect of foreign exchanges rate changes need not analyze, because there is no divided the every net items into details (how much is cash inflow and how much is cash outflow). There are positive number and

negative number in each same item, which is different with net operating cash flow with only positive number. So the absolute change and the relative change are very strange (need not compare).

*~Third part: Trend analysis of Cash Flow statement~*

Third analyze the table 4.16, 4.17 and figure 4.17.

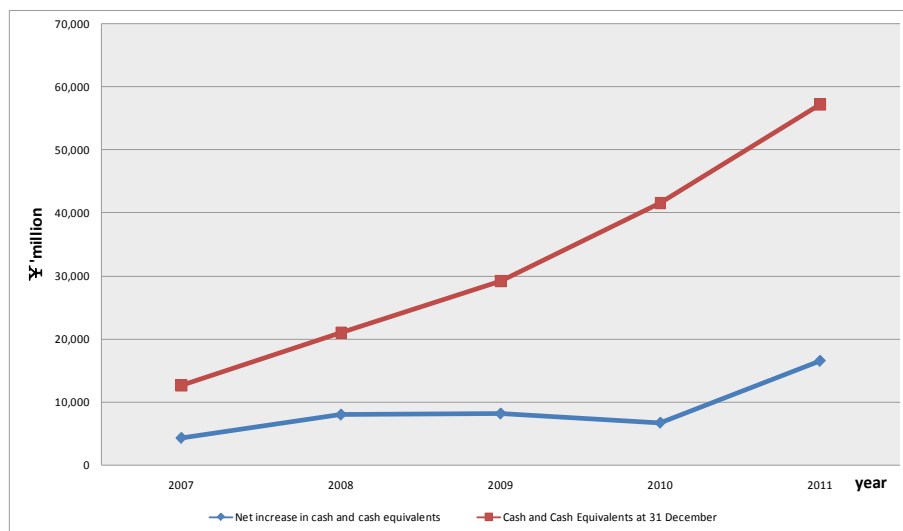
Table 4.16: Details of cash flow every year

(¥'million)	2007	2008	2009	2010	2011
Net increase in cash and cash equivalents	4,295	7,970	8,138	6,695	16,473
Cash and Cash Equivalents at 31 December	12,646	21,013	29,232	41,501	57,192

Table 4.17: Cash flow change every year

	2007-2008		2008-2009		2009-2010		2010-2011	
(¥'million)	absolute change	relative change	absolute change	relative change	absolute change	relative change	absolute change	relative change
Net increase in cash and cash equivalents	3,675	86%	168	2%	-1,443	-18%	9,778	146%
Cash and Cash Equivalents at 31 December	8,367	66%	8,219	39%	12,269	42%	15,691	38%

Figure 4.17: Growth trend of cash flow



In table 4.16 and figure 4.17, we can find the trend of cash and cash equivalents is increasing each year from 12,000 million RMB to 57,000 million RMB. And the net increase is always positive every year with a stable amount about 7,000 million RMB except a rapid growth in 2010-2011. As a whole, the trend is stable growth.

In table 4.17, we can find the highest relative change of net increase is in 2010-2011 with a rate about 140%. And the increase rate of cash and cash equivalents at 31 December is always achieved 40%.

Compared these data with table 4.14 we can get a conclusion. That the highest change in 2010-2011 is resulted from the investing cash inflow from a huge outflow and the decrease of financing cash outflow from a larger outflow last year, through the operating cash inflow is decrease than last year. In additional, the rapid growth of double-digit rate means the operating and management are effective and the future is promising.

***~Fourth part: Comparing cash flow with income~***

Fourth analyze the table 4.18.

Table 4.18: Details of comparing cash flow with income

percentage	2007	2008	2009	2010	2011
Cash receipts from customers/Cash paid to suppliers and employees	-	108%	117%	118%	109%
Cash receipts from customers/Revenue	9.3%	91.5%	111.2%	125.4%	124.5%
Net cash from operating activities/Net income	88%	82%	119%	128%	153%

Viewing the table 4.18, it shows the rate that is made from cash receipts is divided by cash paid, is higher than 100% in general. And the other rates are increase from less than 100% to higher than 100%. As a whole, all of data are stable close to 100%.

First compared cash receipts from customers with cash paid to suppliers and employees, it is important for a company, when achieved net operating cash inflow. Analyzed the structure, we can understand the higher share rate means more sales profit, more efficiency of return and stronger ability of creation in HUAWEI.

Second compared cash receipts from customers with revenue, it can show the ability of withdraw the cash from sales, the quality of sales and the share of given cash from sales in revenue. These higher rates mean the asset of sales can change into cash with a rapid speed



and a higher quality, the primary business is important for HUAWEI and the great operating.

Third compared net cash from operating activities with net income, it show the quality of company's profit (how much cash can support per profit in accounting). So the higher rate means the higher quality of profit.

- **Vertical Analysis**

Let we see the analysis compared with figure 4.12 and 4.13.

Figure 4.18: Structure of cash flow

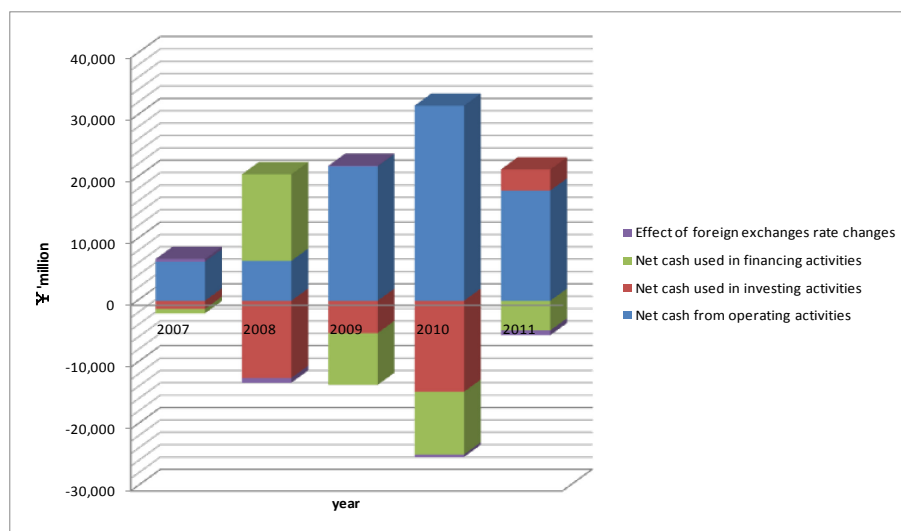


Figure 4.19: Structure of cash inflow

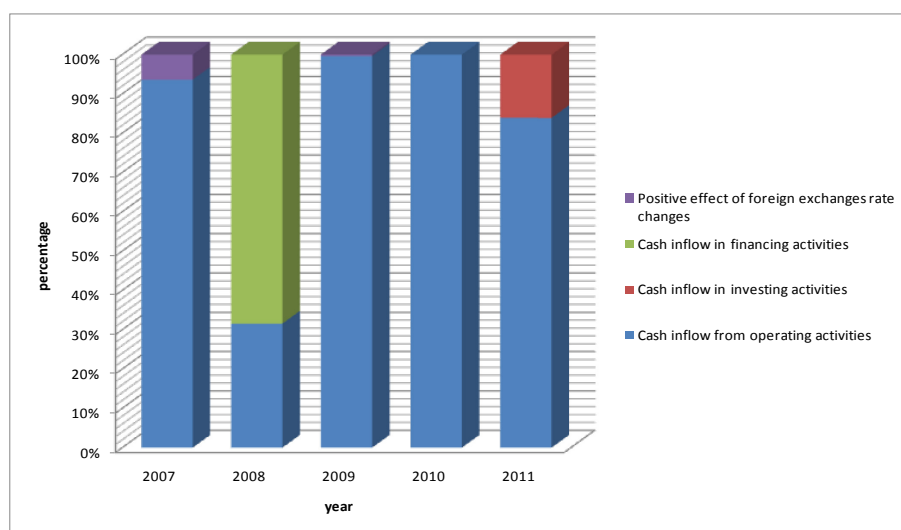
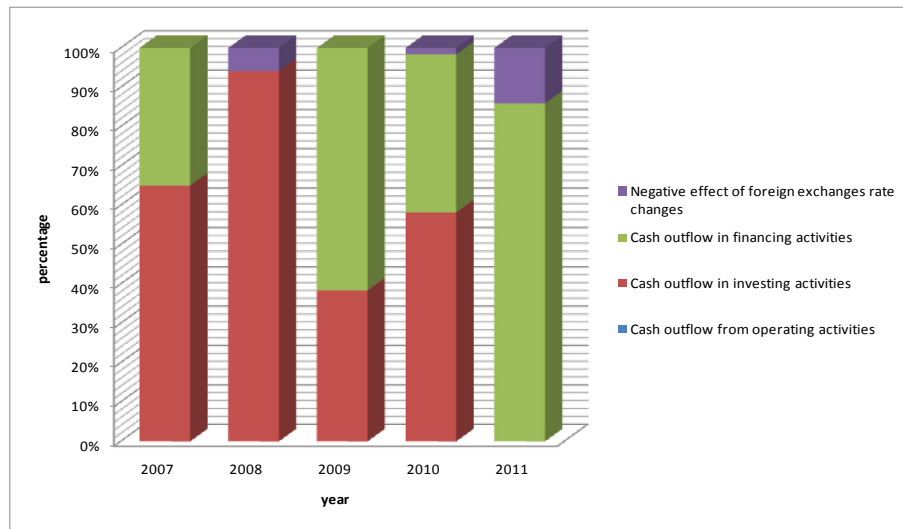


Figure 4.20: Structure of cash outflow



Compared these 3 tables, we can find some situations. First the cash inflow is double than cash out flow each year at lease. Second most of cash inflow is from operating activities, the investing activities cash inflow is only 2011 and the financing activities cash inflow is only 2008. Third most of cash outflow is investing activities or financing activities and the operating cash flow hasn't been negative.

Analysis of investing cash flow: When enterprise expands scale or develops new profit growth point, it must need a lot of cash input. If cash inflows of investment activity cannot compensate the outflow, the investment cash flows must be negative. But if business investment is effective, it will generate cash inflows for repayment of the debt in the future, and create profits, which company has not problem of debt service. Analysis of investment activities cash flow must analyze current projects, can't only analyze cash flow. The data of figures showed consistent with HUAWEI's practical situation.

Analysis of financing cash flow: In general, financing activities generated the more cash inflow, the debt service pressure it would be. Combined with the figures, most of financing cash flow is negative, which it is pay for the loans interest. But there is a large financing cash inflow in 2008 made from short-term loans, maybe it would be a burden in future.

For a company, it can be different of cash flows because of the positive or negative direction, so the cash flow will produce different results, which will have important influence on the financial position of the enterprise. Therefore, through the analysis of HUAWEI's cash flow direction, we can get some conclusion:

In 2007, 2009 and 2010, the net operating cash flow is positive and others are negative. It shows the most of business cash is from operating. If there is a crisis in operating, financial situation will be worse.

In 2008, the net operating and financing cash flow are positive and net investing cash flow is negative. Enterprise's operating activities and borrowing can generate cash inflows, explain financial situation is stable. To expand investment in negative net inflows also belongs to the normal investment activities, but need pay attention to the investment scale.

In 2011, the net operating and investing cash flow are positive and net financing cash flow is negative. It explains enterprise operating and investing activities generated cash inflows. But the net financing cash flow is negative, which means there is a lot of debt due to cash payments. And the net inflows is greater than the net outflow, the financial situation of HUAWEI is relatively stable.

## **4.2 Financial Ratios Analysis**

A financial ratio (or accounting ratio) is a relative magnitude of two selected numerical values taken from an enterprise's financial statements. Often used in accounting, there are many standard ratios used to try to evaluate the overall financial condition of a corporation or other organization. Financial ratios may be used by managers within a firm, by current and potential shareholders (owners) of a firm, and by a firm's creditors. Financial analysts use financial ratios to compare the strengths and weaknesses in various companies.

Values used in calculating financial ratios are taken from the balance sheet, income statement, statement of cash flows or (sometimes) the statement of retained earnings. These comprise the firm's "accounting statements" or financial statements. The statements' data is based on the accounting method and accounting standards used by the organization.

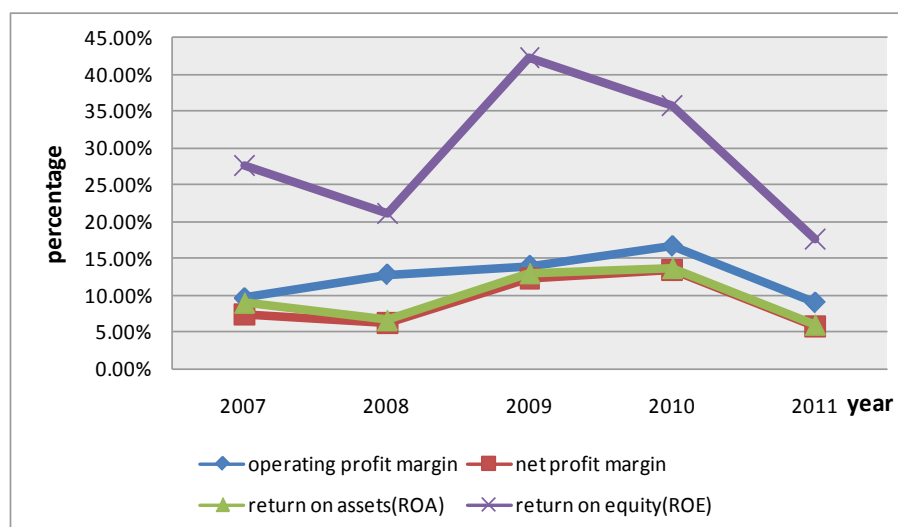
### 4.2.1 Profitability Ratios Analysis

Let me analyze profitability ratios from table 4.19 and figure 4.21.

Table 4.19: Details of profitability ratios

percentage	2007	2008	2009	2010	2011
operating profit margin	9.7%	12.9%	14.1%	16.8%	9.1%
net profit margin	7.5%	6.3%	12.3%	13.5%	5.7%
return on assets(ROA)	9.0%	6.6%	13.1%	13.8%	6.0%
return on equity(ROE)	27.5%	21.0%	42.2%	35.6%	17.6%

Figure 4.21: Trend of profitability ratios



Viewing table 4.19 and figure 4.21, we can see there are some frequent fluctuations in return on equity in 17%~42%. Other ratios just are a little change over the time and most keep a stable level liked operating profit margin keeping around 13%, net profit margin keeping around 9% and return on equity keeping around 10%.

First, operating profit margin shows how much currency can be made for net profit per revenue, when minus business cost. Only enough operating profit can create more net profit. We can see its average is around 13% that is just a normal data. Here is a rapid decrease in 2010-2011, which is a result from the larger increase about costs of sales and R&D expenses.

Second, net profit margin shows the direct data of profitability, when add net non-business income. We can see its average is around 9% that is not a highest data but it is enough higher for company expansion. Compared with last ratio, we can find here is 3% decrease after non-business activities, which is a relative high result. From my research, it is resulted from a frequent fluctuation of exchange rate that is the most important fact in non-business because HUAWEI is an international trade company. So the rapid decrease in 2010-2011 must be resulted from the loss of exchange.

Third, return on assets indicates that the comprehensive utilization efficiency of enterprise total assets. The higher ratio means the higher utilization efficiency that indicates a great effect from increasing income and decreasing expense. We can see the higher growth is in 2009 and 2010.

Fourth, return on equity indicates that the ability to generate profit from invested capital in form of return during a period. The higher ratio means the effective profitability. We can see here are a rapid growth in 2008-2009, a special decrease in 2007-2008 and a continuous decrease in 2009-2011. About this situation, it will be analyzed in pyramidal decompositions and influence quantification.

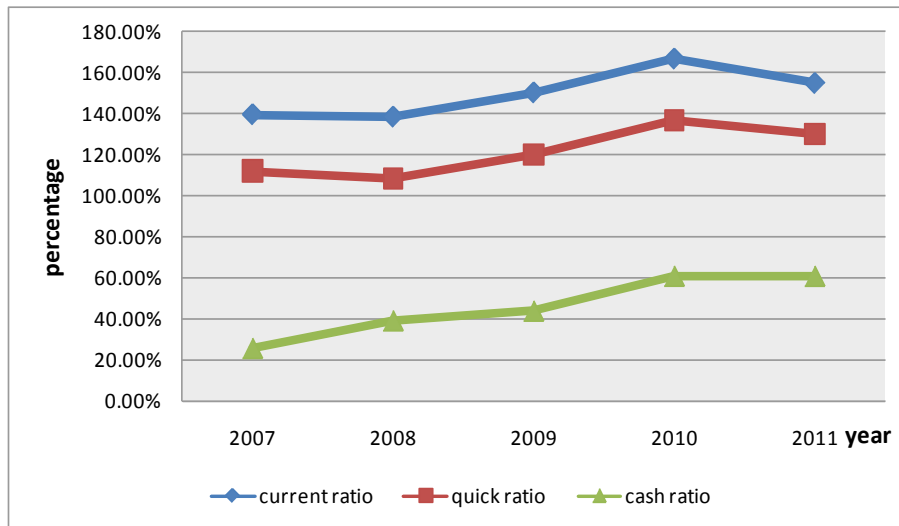
#### **4.2.2 Liquidity Ratios Analysis**

Let me analyze liquidity ratios from table 4.20 and figure 4.22.

Table 4.20: Details of liquidity ratios

degree	2007	2008	2009	2010	2011
current ratio	1.40	1.39	1.51	1.67	1.55
quick ratio	1.12	1.09	1.20	1.37	1.30
cash ratio	0.26	0.39	0.44	0.61	0.61

Figure 4.22: Trend of liquidity ratios



Liquidity ratios can measure company's ability to meets its immediate or short-term liabilities and obligations. Viewing table 4.20 and figure 4.22, we can find these ratios are stable growth over time. Current ratio grows from 1.4 to 11.7 then turn down 1.5 in 2011 with an average level of 1.5. Quick ratio grows from 1.1 to 1.4 then turn down 1.3 in 2011 with an average level of 1.2. Cash ratio grows from 0.3 to keeping 0.6 in 2010-2011 with an average level of 0.5. As a whole, the trend of solving short-term obligations ability is stable.

First, the current ratio is an indication of a firm's market liquidity and ability to meet creditor's demands. Acceptable current ratios vary from industry to industry and are generally between 1.5 and 3 for healthy businesses. So the HUAWEI's average level of 1.5 is standard. If a company's current ratio is in this range, then it generally indicates good short-term financial strength. If current liabilities exceed current assets (the current ratio is below 1), then the company may have problems meeting its short-term obligations. If the

current ratio is too high, then the company may not be efficiently using its current assets or its short-term financing facilities. This may also indicate problems in working capital management.

Second, due to inventory speed of turning into cash is relatively slow, the quick ratio is better than current ratio reflected the repayment guarantee level for current liabilities. Acceptable current ratios vary from industry to industry and are generally between 1.1 and 1.5 for healthy businesses. So the HUAWEI's average level of 1.5 is standard.

This ratio use the best liquid assets, it is the best conservative ratio. It is quick ratio's numerator minus receivables and direct reflects the abilities of payback. In normal the ratio is the lowest of liquidity ratios. If this ratio is too higher, it means the current assets used in inefficient and get a lower return rate and a higher cost of capital rate. Acceptable current ratios vary from industry to industry and are generally between 0.8 and 1.1 for healthy businesses. Although the HUAWEI's average level of 0.5 is not standard, we can't conclude here are some risks of repayment because of standard level in other liquidity ratios. If HUAWEI can get receivables quickly, it is just few risks.

Compared the 3 ratios with Balance Sheet, we can get the reason of current ratio and quick ratio decrease in 2010-2011. Owed to cash ratio kept stable in 2010-2011, it is not the factor. Decrease of financial assets held for trading is the main factor for current ratio, which is resulted from the fluctuation of exchange rate. Growth decrease of trade and other receivables is the main factor for quick ratio, which is resulted some great receivables negotiations.

#### **4.2.3 Solvency Ratios Analysis:**

These ratios can measure company's liability to meets its long-term obligations.

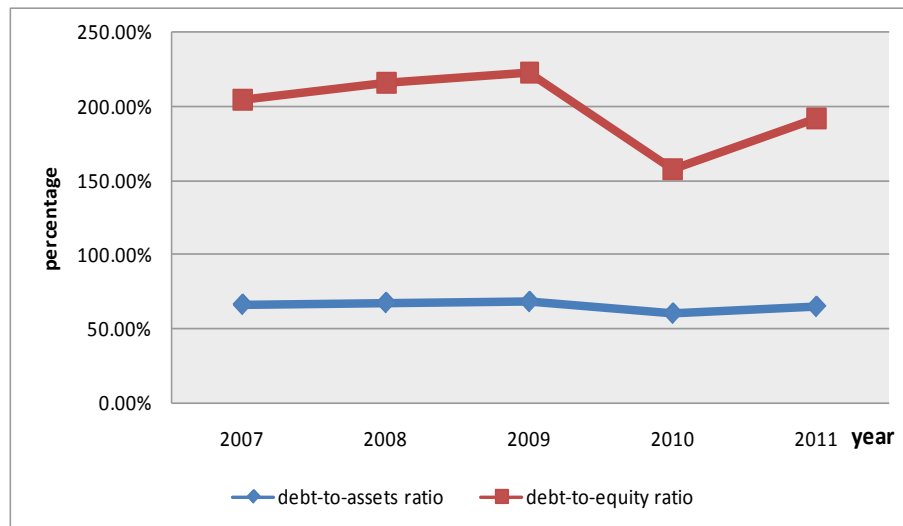
*~First part: Trend analysis of debt/assets ratio and debt/equity ratio~*

Let me analyze solvency ratios from table 4.21 and figure 4.23.

Table 4.21: Details of solvency ratios

percentage	2007	2008	2009	2010	2011
debt-to-assets ratio	67.1%	68.3%	69.0%	61.2%	65.7%
debt-to-equity ratio	204.6%	215.7%	222.4%	157.9%	191.8%

Figure 4.23: Trend of solvency ratios



Viewing the table 4.21 and figure 4.23, we can find the trend of debt to assets ratio is stable in an average rate of 66%, but the trend of debt to equity ratio is floating in an average rate of 200%. In additional, the debt to equity ratio decreases to 150 % (a lower level) in 2009-2010.

First, debt to assets Ratio is a financial ratio that indicates the percentage of a company's assets that are provided via debt. It is the share of capital from creditors in assets and the guarantee degree of enterprise assets for creditors' rights and interests. The smaller this ratio, shows that the stronger of long-term debt paying ability. The higher the ratio, the greater risk will be associated with the firm's operation. In other words, the higher this ratio, the higher degree of debt utilization, which means company can get a lot of capital for operating just depended on a little equity. In addition, high debt to assets ratio may indicate low borrowing capacity of a firm, which in turn will lower the firm's financial flexibility. In general, if the ratio is less than 0.5, most of the company's assets are financed through equity. If the ratio is greater than 0.5, most of the company's assets are financed



through debt. So we can conclude HUAWEI's assets most are financed through debt with a lower risk level, because the average rate is just 66%.

Second, the debt to equity ratio is a financial ratio indicating the relative proportion of shareholders' equity and debt used to finance a company's assets. Closely related to leveraging, the ratio is also known as Risk, Gearing or Leverage. In other words, it is different sides of the same things with last ratio and they explain the company solvency ability together. The lower this ratio means the higher repayment ability in long-term, the higher degree of debt protection and the lower risk for creditors, which indicates a higher borrowing capacity of a firm. So HUAWEI's borrowing capacity is not high because of the higher debt to equity ratio. As for the decrease in 2009-2010, it is resulted from the increase of equity capital input, which HUAWEI earned a lot of profit and distribute a lots (positive dividend policy) this term.

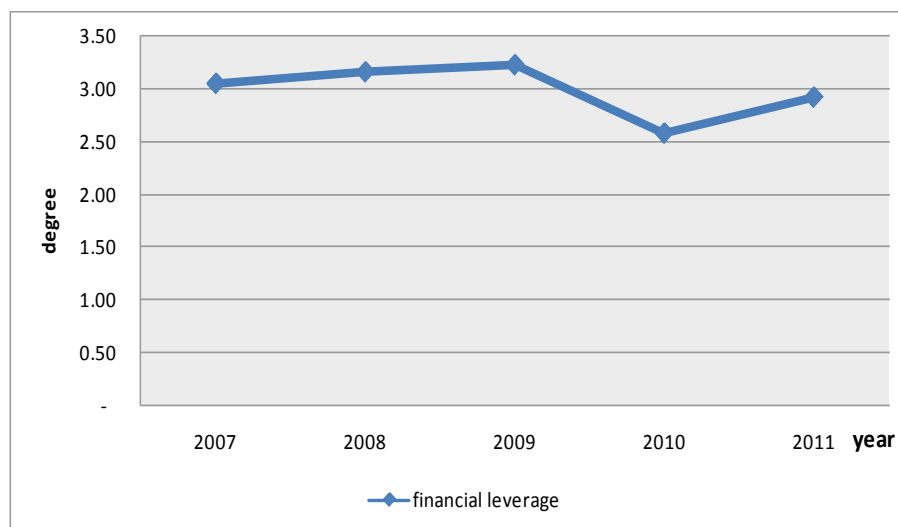
***~Second part: Trend analysis of financial leverage and interest coverage~***

Let me analyze solvency ratios from table 4.22 and figure 4.24.

Table 4.22: Details of other solvency ratios

degree	2007	2008	2009	2010	2011
financial leverage	3.05	3.16	3.22	2.58	2.92
interest coverage	6.27	2.45	N.A.	14.48	3.15
fixed charge coverage	5.18	2.45	N.A.	14.48	3.15

Figure 4.24: Trend of financial leverage



Viewing the table 4.22 and figure 4.24, we can find the trend of financial leverage is stable in an average degree of 3, but the trends of interest coverage and fixed charge coverage are floating in an average degree of 6.6. In additional, here is a decrease in 2009-2010.

First, the degree of financial leverage to which an investor or business is utilizing borrowed money. Companies that are highly leveraged may be at risk of bankruptcy if they are unable to make payments on their debt; they may also be unable to find new lenders in the future. Financial leverage is not always bad, however; it can increase the shareholders' return on their investment (the higher of leverage means the more efficiency of debt utilization) and there is often tax advantages associated with borrowing also called leverage. According to HUAWEI's financial data, we can know the leverage shows some advantages and benefits instead of risk. In additional, the reason of decrease is same analysis of debt to equity ratio in 2009-2010.

Second, interest coverage is a measure of a company's ability to honor its debt payments. A lower interest coverage means less earnings are available to meet interest payments and that the business is more vulnerable to increases in interest rates. In additional, creditors often use this ratio to measure safety degree of investing. When the interest coverage is smaller than 1, the company is not generating enough cash from its operations EBIT to meet its interest obligations. The Company would then have to either use cash on hand to make up the difference or borrow funds. Typically, it is a warning sign when interest coverage falls below 2.5 times. According to the table, the levels of interest coverage are enough to meet interest payment. In additional, the net financial income leads to no interest in 2009, which is the reason of N.A. and can't put into figure.

As for the degree of fixed charge coverage, it needn't analyze more. Because we just can find lease payments in 2007 Balance Sheet. Maybe it is resulted from change of accounting method.

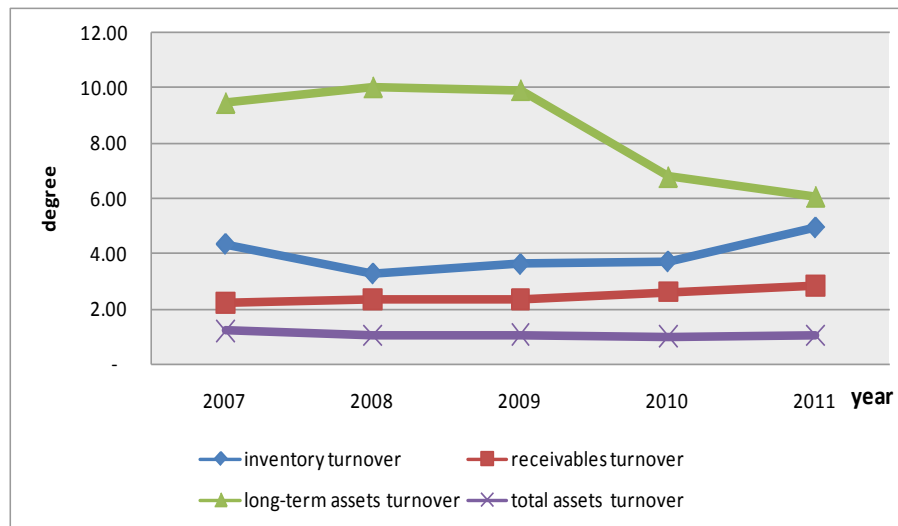
## 4.2.4 Activity Ratios Analysis

Let me analyze solvency ratios from table 4.23 and figure 4.26.

Table 4.23: Details of activity ratios

degree	2007	2008	2009	2010	2011
inventory turnover	4.34	3.27	3.61	3.71	4.93
receivables turnover	2.25	2.37	2.36	2.66	2.88
long-term assets turnover	9.44	10.01	9.91	6.77	6.06
total assets turnover	1.21	1.06	1.07	1.02	1.06

Figure 4.26: Trend of activity ratios



Activity ratios measure how well a company user its assets. Viewing the table 4.23 and figure 4.26, we can see the degree trend of inventory turnover, receivables turnover and total assets turnover are stable in an average of 4, 2.5 and 1. But long-term assets turnover is floating in an average of 8.5 and decrease from 10 to 6 during 2009-2011.

First, the Inventory turnover is a measure of the number of times inventory is sold or used in a time period such as a year. A low turnover rate may point to overstocking, obsolescence, or deficiencies in the product line or marketing effort. However, in some instances a low rate may be appropriate, such as where higher inventory levels occur in anticipation of rapidly rising prices or expected market shortages. Conversely a high turnover rate may indicate inadequate inventory levels, which may lead to a loss in

business as the inventory is too low. This often can result in stock shortages. According to these financial data, we can know HUAWEI's operating and expansion efficiency are much higher than others competitors. The more inventory turnover can lead to shortages in stock.

Second, receivables turnover measures the number of times, on average receivables are collected during the period. The higher ratio means the more effective income realization. It indicates whether it is well in revenues income quickly. According to the average rate of 2.5, we can know most HUAWEI's receivables are more than 33% in total revenues, which is a risk when receivables can't get back.

Compared long-term assets turnover and total assets turnover, the assets turnover is a indicator in assessing the efficiency of getting revenues used assets, which can be analyzed by the change of close year. In this figure, we find total assets turnover is stable over time and long-term assets turnover is decrease in 2009-2011. So we can conclude the long-term assets utilization is decrease and the short-term assets utilization is increase. It is resulted from that the growth rate of revenues and short-term assets is lower than long-term assets (that can be found from Balance Sheet and Income statement).

## 4.3 Pyramidal Decompositions and Influence Quantification

### 4.3.1 Pyramidal Decompositions

Pyramidal decompositions enable to analyze what drives the value of financial ratios. The principle is to express selected (basic) ratio as a product of component ratios. And the fundamental example of the pyramidal decomposition is the DuPont Analysis (decompose ROE ratio by three component Ratios).

DuPont analysis is an expression which breaks ROE (Return on Equity) into three parts.

Table 4.24: Details of ROE decompositions (DuPont)

percentage	2007	2008	2009	2010	2011
Net Income (EAT) /Revenues	7.45%	6.27%	12.26%	13.54%	5.71%
Revenues/Total Assets	121.25%	105.90%	106.74%	101.99%	105.51%
Total asstes/Equity	304.86%	315.69%	322.41%	257.90%	291.84%
ROE=Net Profit/Equity	27.55%	20.95%	42.19%	35.61%	17.59%

### 4.3.2 Influence Quantification

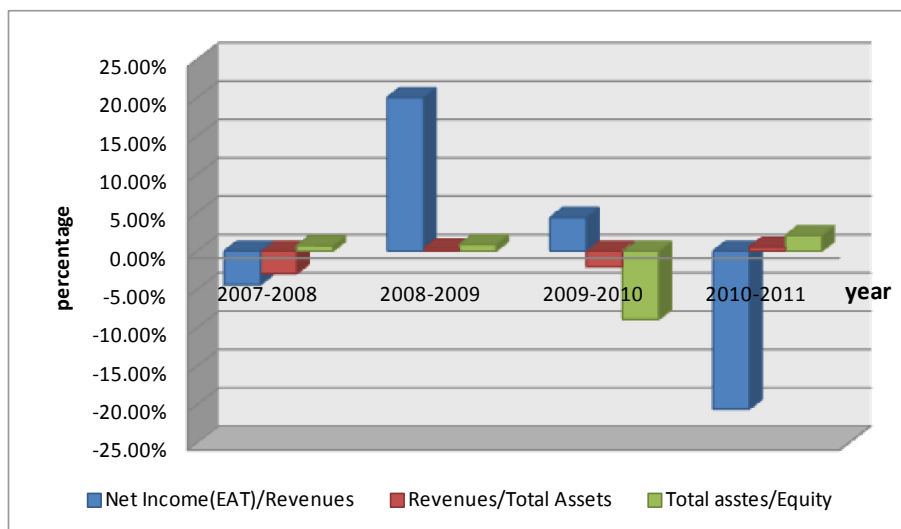
Influence quantification enables to analyze indicators, whose changes have caused change in the basic ratio. According to some details and methods we can quantify, which component ratios contributed to the change in basic ratio at most. It means we can know which component ratio is the best important influence in basic ratio and do most at it for useful and efficient.

- **Method of Gradual Changes**

Table 4.25: Details of method of gradual changes

2007–2008					
	$a_0$	$a_1$	$\Delta a$	$\Delta X_{ai} (\Delta ROE_{ai})$	Order
$a_1 = \text{EAT/Revnues}$	7.45%	6.27%	-1.19%	-4.38%	1
$a_2 = \text{Revenues/Total Assets}$	121.25%	105.90%	-15.35%	-2.93%	2
$a_3 = \text{Total asstes/Equity}$	304.86%	315.69%	10.83%	0.72%	3
$\Sigma \text{ sum}$				-6.59%	
2008–2009					
	$a_0$	$a_1$	$\Delta a$	$\Delta X_{ai} (\Delta ROE_{ai})$	Order
$a_1 = \text{EAT/Revnues}$	6.27%	12.26%	5.99%	20.03%	1
$a_2 = \text{Revenues/Total Assets}$	105.90%	106.74%	0.83%	0.32%	3
$a_3 = \text{Total asstes/Equity}$	315.69%	322.41%	6.71%	0.88%	2
$\Sigma \text{ sum}$				21.23%	
2009–2010					
	$a_0$	$a_1$	$\Delta a$	$\Delta X_{ai} (\Delta ROE_{ai})$	Order
$a_1 = \text{EAT/Revnues}$	12.26%	13.54%	1.28%	4.40%	2
$a_2 = \text{Revenues/Total Assets}$	106.74%	101.99%	-4.74%	-2.07%	3
$a_3 = \text{Total asstes/Equity}$	322.41%	257.90%	-64.50%	-8.91%	1
$\Sigma \text{ sum}$				-6.57%	
2010–2011					
	$a_0$	$a_1$	$\Delta a$	$\Delta X_{ai} (\Delta ROE_{ai})$	Order
$a_1 = \text{EAT/Revnues}$	13.54%	5.71%	-7.83%	-20.59%	1
$a_2 = \text{Revenues/Total Assets}$	101.99%	105.51%	3.52%	0.52%	3
$a_3 = \text{Total asstes/Equity}$	257.90%	291.84%	33.94%	2.05%	2
$\Sigma \text{ sum}$				-18.03%	

Figure 4.27: Factors structure of method of gradual changes

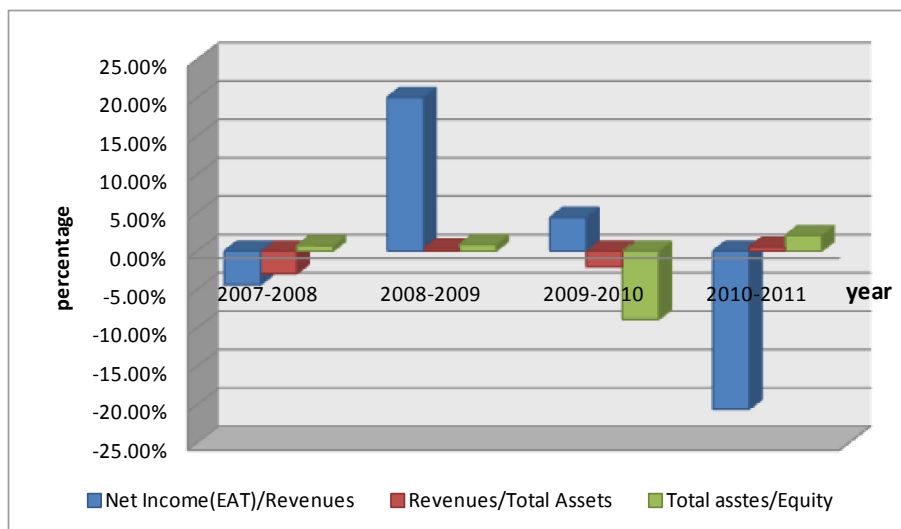


- **Logarithmic Decomposition Method**

Table 4.26: Details of logarithmic decomposition method

2007–2008					
	$a_0$	$a_1$	$I_a$	$\Delta X_{ai}(\Delta ROE_{ai})$	Order
$a_1 = \text{EAT/Revnues}$	7.45%	6.27%	84.10%	-4.17%	1
$a_2 = \text{Revenues/Total Assets}$	121.25%	105.90%	87.34%	-3.26%	2
$a_3 = \text{Total asstes/Equity}$	304.86%	315.69%	103.55%	0.84%	3
$\Sigma \text{ sum}$				-6.59%	
2008–2009					
	$a_0$	$a_1$	$I_a$	$\Delta X_{ai}(\Delta ROE_{ai})$	Order
$a_1 = \text{EAT/Revnues}$	6.27%	12.26%	195.60%	20.36%	1
$a_2 = \text{Revenues/Total Assets}$	105.90%	106.74%	100.79%	0.24%	3
$a_3 = \text{Total asstes/Equity}$	315.69%	322.41%	102.13%	0.64%	2
$\Sigma \text{ sum}$				21.23%	
2009–2010					
	$a_0$	$a_1$	$I_a$	$\Delta X_{ai}(\Delta ROE_{ai})$	Order
$a_1 = \text{EAT/Revnues}$	12.26%	13.54%	110.44%	3.85%	2
$a_2 = \text{Revenues/Total Assets}$	106.74%	101.99%	95.56%	-1.76%	3
$a_3 = \text{Total asstes/Equity}$	322.41%	257.90%	79.99%	-8.66%	1
$\Sigma \text{ sum}$				-6.57%	
2010–2011					
	$a_0$	$a_1$	$I_a$	$\Delta X_{ai}(\Delta ROE_{ai})$	Order
$a_1 = \text{EAT/Revnues}$	13.54%	5.71%	42.18%	-22.05%	1
$a_2 = \text{Revenues/Total Assets}$	101.99%	105.51%	103.45%	0.87%	3
$a_3 = \text{Total asstes/Equity}$	257.90%	291.84%	113.16%	3.16%	2
$\Sigma \text{ sum}$				-18.03%	

Figure 4.28: Factors structure of logarithmic decomposition method



- **Differences Between Method of Gradual Changes and Logarithmic Decomposition Method**

Table 4.26: Details of differences

2007–2008			
	Method of Gradual Change	Logarithmic Method	Differences
$a_1 = \text{EAT/Revenues}$	-4.38%	-4.17%	0.21%
$a_2 = \text{Revenues/Total Assets}$	-2.93%	-3.26%	-0.33%
$a_3 = \text{Total asstes/Equity}$	0.72%	0.84%	0.12%
$\Sigma \text{ sum}$	-6.59%	-6.59%	0.00%
2008–2009			
	Method of Gradual Change	Logarithmic Method	Differences
$a_1 = \text{EAT/Revenues}$	20.03%	20.36%	0.32%
$a_2 = \text{Revenues/Total Assets}$	0.32%	0.24%	-0.08%
$a_3 = \text{Total asstes/Equity}$	0.88%	0.64%	-0.24%
$\Sigma \text{ sum}$	21.23%	21.23%	0.00%
2009–2010			
	Method of Gradual Change	Logarithmic Method	Differences
$a_1 = \text{EAT/Revenues}$	4.40%	3.85%	-0.55%
$a_2 = \text{Revenues/Total Assets}$	-2.07%	-1.76%	0.31%
$a_3 = \text{Total asstes/Equity}$	-8.91%	-8.66%	0.24%
$\Sigma \text{ sum}$	-6.57%	-6.57%	0.00%
2010–2011			
	Method of Gradual Change	Logarithmic Method	Differences
$a_1 = \text{EAT/Revenues}$	-20.59%	-22.05%	-1.46%
$a_2 = \text{Revenues/Total Assets}$	0.52%	0.87%	0.35%
$a_3 = \text{Total asstes/Equity}$	2.05%	3.16%	1.11%
$\Sigma \text{ sum}$	-18.03%	-18.03%	0.00%

Viewing the table 4.25, we can find the differences are very negligible between method of gradual changes and logarithmic decomposition method, which can't influence the order. These differences are just a normal change because of analysis used different method. So we can just analyze one method of them, and let us analyze the method of gradual changes.

In table 4.25 and figure 4.27, it shows the order of importance each factor. As a whole, we can see the most important factor is net profit margin, which rating most first and the rating of second and third is assets turnover or financial leverage. In specially, the influence of net profit margin is powerful in 2008-2009 and 2010-2011. In additional, the



powerful influence is financial leverage no net profit margin in 2009-2010.

According to these finds, we can conclude the change of HUAWEI's ROE is most influenced by the change of net profit margin. In general, net profit margin is the core of DuPont analysis, because it reflects the efficiency of getting revenues and managing costs. In the income statement, we can see the increase of EAT (133%) is much more than the increase of revenues (19%) in 2008-2009, which is resulted from the huge decrease of finance expenses (-119%). So it is much positive effect on the change of ROE. In additional, we can also see the decrease of EAT (-53%) is much more than the decrease of revenues (-5%), which is resulted from a effect that finance expenses increase (178%). So it is much negative effect on the change of ROE. As a whole, the finance expenses are more effects on HUAWEI's benefits in particular exchange rate.

As for the financial leverage rating first in 2009-2010, it is resulted from a effect that the total assets increase (28%) is less than the equity increase (60%). So HUAWEI input more new equity capital and less new debt capital, which results in a decrease (-65%) of financial leverage. It will decrease the financial risk but also decrease the debt utilization.

## 5. CONCLUSION

HUAWEI is the second largest telecommunications provider and a leading provider of global information and communications solutions. Company concentrates on the innovation about continue needs of customers, the opening cooperation. In telecommunications networks, enterprise networks, consumers and cloud computing HUAWEI constructed end-to-end solutions in advantages. And it is committed to provide competitive ICT solutions and services to telecom operators, enterprises and consumers, continue to improving customer experience, to create maximum value for customers. At present, HUAWEI's products and solutions have been applied to more than 140 countries, the services to a third of the population worldwide.

Even though financial crisis and its after-crisis effect have great influence on the whole world, HUAWEI always keep a relative high growth and continuous expansion. It is an uncommon international innovation company in China and takes an important part in information and communication technology industries. So it is analyzed in this bachelor thesis.

In chapter 2, it is some introductions of financial analysis methodology.

In chapter 3, it shows the general situation of HUAWEI. We get some company details of HUAWEI included production, service, innovation, history and culture from this chapter.

In chapter 4, it shows more analysis about HUAWEI's financial situation, we understand HUAWEI more. Assets and liabilities keep high growth; revenues and cost of sales also continue high growth but growth of gross profit and net income is slow down in 2010-2011; net increase of cash and cash equivalents keeps positive. Then the most important part of assets is current assets and it is current liabilities in liabilities. In additional we can know,

HUAWEI's profitability is well from analysis of profitability ratios; its ability of meet short-term liabilities is well from analysis of liquidity ratios; its debt level of is relative low from solvency ratios; its efficiency of capital utilization is well from activity ratios. At the end, the most important effect of ROE is net profit margin.

There is a word from HUAWEI: we can satisfy your demand at anytime, anyplace and in anyway. The consumers are always the core of HUAWEI's strategy and another core is innovation. HUAWEI devotes to promote development of information and communication technology industries. Face to the risk of world economy, HUAWEI should develop special advantages included innovations, financing, operating and management, then focus on some problem that are competition, market period and the increase of costs.

Information and communication technology are sunrise industry and their market scale will be expanded by the increase of demands. If HUAWEI wants to keep taking an important part in it, needs do more and better.

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## **LIST of ABBREVIATIONS**

CT	Communication Technology
IT	Information Technology
DSL	Digital Subscriber Line
ICT	Information and Communications Technology
IDC	Internet Data Center
IP	Internet Protocol
R&D	Research and Development
TCO	Total Cost of Ownership
TVO	Total Value of Ownership
Wi-Fi	Wireless Fidelity
WiMAX	Worldwide Interoperability for Microwave Access
ROA	Return on Assets
ROE	Return on Equity
EBIT	Earning before Interest and Tax
EBT	Earning before Tax
EAT	Earning after Tax

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Ostrava dated 5<sup>th</sup> May, 2013

Zhuo ZHANG  
.....  
Student's name and surname

## **List of Annexes**

Annex 1 Balance Sheet

Annex 2 Income Statement

Annex 3 Cash Flow

## Annex 1: Balance Sheet

(¥' million)	2007	2008	2009	2010	2011
<b>Assets</b>					
Cash and cash equivalents	12,646	21,017	29,232	41,501	57,192
Trade and other receivables	42,855	52,854	63,282	68,734	70,832
Financial assets held for trading	-	-	-	13,957	5,150
Other financial assets	-	8,813	7,145	248	568
Inventories	13,724	23,044	24,947	27,568	25,873
<b>Total Current Assets</b>	<b>69,225</b>	<b>105,728</b>	<b>124,606</b>	<b>152,008</b>	<b>159,615</b>
Property, plant and equipment	6,516	7,285	8,317	16,008	18,631
Long-term leasehold prepayments	391	-	-	-	-
Intangible assets and goodwill	93	127	553	719	1,378
Trade and other receivables	-	-	-	116	29
Investments	641	490	311	509	683
Other non-current financial assets	-	225	108	85	471
Deferred tax assets	2,560	3,742	5,147	7,210	9,095
Other non-current assets	-	643	611	2,329	3,381
<b>Total Non-current Assets</b>	<b>10,202</b>	<b>12,512</b>	<b>15,047</b>	<b>26,976</b>	<b>33,668</b>
<b>Total Assets</b>	<b>79,426</b>	<b>118,240</b>	<b>139,653</b>	<b>178,984</b>	<b>193,283</b>
<b>Equity and Liabilities</b>					
Borrowings	1,087	12,983	7,887	2,695	7,057
Income tax payable	545	1,355	3,696	4,203	2,323
Trade and other payables	46,743	60,528	70,013	82,656	91,592
Provision for warranties	1,064	1,274	1,175	1,556	1,962
<b>Total Current Liabilities</b>	<b>49,439</b>	<b>76,140</b>	<b>82,771</b>	<b>91,110</b>	<b>102,934</b>
Borrowings	1,615	1,026	8,490	10,264	13,270
Defined benefit post-employment obligations	-	2,791	3,512	6,266	8,392
Deferred government grants	-	626	933	1,354	1,857
Other payables	2,259	-	-	-	-
Deferred tax liabilities	-	203	631	590	602
<b>Total Non-current Liabilities</b>	<b>3,874</b>	<b>4,646</b>	<b>13,566</b>	<b>18,474</b>	<b>24,121</b>
<b>Total liabilities</b>	<b>53,313</b>	<b>80,786</b>	<b>96,337</b>	<b>109,584</b>	<b>127,055</b>
Equity attributable to equity holders of the company	25,993	37,421	43,253	69,381	66,274
Minority Interest	60	33	63	19	-46
<b>Total equity</b>	<b>26,053</b>	<b>37,454</b>	<b>43,316</b>	<b>69,400</b>	<b>66,228</b>
<b>Total equity and liabilities</b>	<b>79,426</b>	<b>118,240</b>	<b>139,653</b>	<b>178,984</b>	<b>193,283</b>



## Annex 2: Income Statement

(¥'million)	2007	2008	2009	2010	2011
Revenue	96,301	125,217	149,059	182,548	203,929
Cost of sales	59,525	75,459	90,090	102,195	127,481
<b>Gross profit</b>	<b>36,775</b>	<b>49,758</b>	<b>58,969</b>	<b>80,353</b>	<b>76,448</b>
Research and development expenses	–	10,469	13,340	17,653	23,696
Selling, general and administrative expenses	–	22,422	24,169	31,439	33,770
Operating expenses	26,834	–	–	–	–
Other operating expenses, net	582	670	408	585	400
<b>Operating profit before financing costs</b>	<b>9,359</b>	<b>16,197</b>	<b>21,052</b>	<b>30,676</b>	<b>18,582</b>
Financial cost	1,492	6,623	–	2,118	5,897
Financial expense	–	–	1,255	–	–
<b>Net finance expense / (income)</b>	<b>1,492</b>	<b>6,623</b>	<b>-1,255</b>	<b>2,118</b>	<b>5,897</b>
Share of losses of associates	-55	193	163	10	228
<b>Profit before taxes and minority interest</b>	<b>7,813</b>	<b>9,381</b>	<b>22,144</b>	<b>28,548</b>	<b>12,457</b>
Income tax expenses	636	1,533	3,870	3,832	810
<b>Net income for the year</b>	<b>7,177</b>	<b>7,848</b>	<b>18,274</b>	<b>24,716</b>	<b>11,647</b>

## Annex 3: Cash Flow

(¥'million)	2007	2008	2009	2010	2011
Cash receipts from customers	8,955	114,612	165,802	228,865	253,847
Cash paid to suppliers and employees	–	-105,745	-141,411	-194,205	-233,092
Interest and income tax paid	-2,633	–	–	–	–
Other operating cash flows	–	-2,412	-2,650	-3,105	-2,929
<b>Net cash from operating activities</b>	<b>6,322</b>	<b>6,455</b>	<b>21,741</b>	<b>31,555</b>	<b>17,826</b>
<b>Net cash used in investing activities</b>	<b>-1,318</b>	<b>-12,477</b>	<b>-5,219</b>	<b>-14,708</b>	<b>3,421</b>
<b>Net cash used in financing activities</b>	<b>-709</b>	<b>13,992</b>	<b>-8,384</b>	<b>-10,152</b>	<b>-4,774</b>
<b>Net increase in cash and cash equivalents</b>	<b>4,295</b>	<b>7,970</b>	<b>8,138</b>	<b>6,695</b>	<b>16,473</b>
Cash and Cash Equivalents at 1 January	7,920	13,822	21,013	35,213	41,501
Effect of foreign exchanges rate changes	431	-779	81	-407	-782
<b>Cash and Cash Equivalents at 31 December</b>	<b>12,646</b>	<b>21,013</b>	<b>29,232</b>	<b>41,501</b>	<b>57,192</b>